Part 1
Evaluation Systems & Effective Storytelling

Makoto Shida, ASHBi-URA

ASHBi Research Acceleration Unit

WPI-ASHBi, Kyoto University

Makoto Shida, ASHBi-URA

- Individual Writing Support (@ ASHBi, from 2019)
  KAKENHI: Transformative Research A/B, Kiban S/A/C & Wakate
  Other grants including JST-FOREST, AMED etc.

- Seminar Lecturer
  KAKENHI, DC1/2 Fellowships, and others

KAKENHI Seminars

DC1/DC2 Seminars

Other Seminars
(outside of ASHBi)

Grant Application is about Convincing your Research Proposal!

2 Important factors of proposal

Research Idea ✕ **Storytelling**

↑
Today

Today's Agenda

1. Basic Information and Application Process

2. Evaluation System for WAKATE & Kiban C

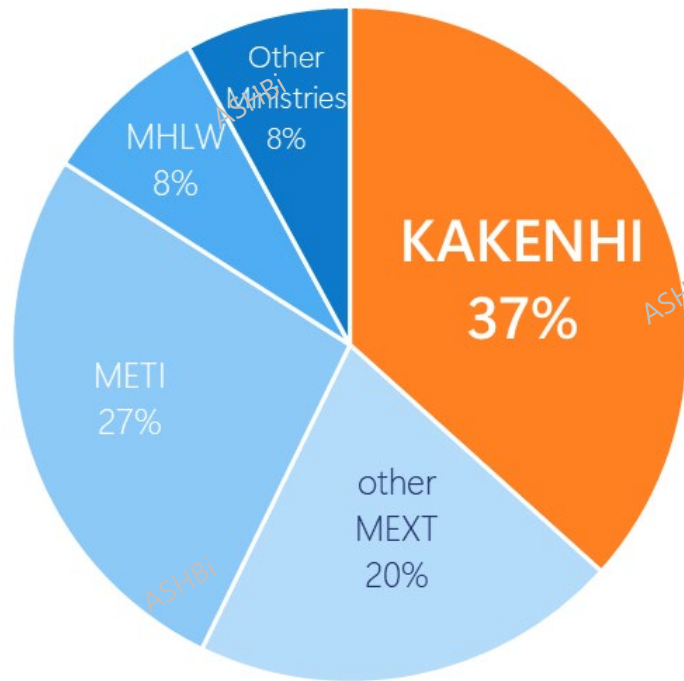3. Storytelling: Preparing an Effective Proposal

JSPS funding programs for PhD students & Early-stage researchers

Fellowships

PhD Students

DC1
for prospective PhD students

DC2
for enrolled PhD students

Postdocs

PD
for "permanent resident holders" and Japanese postdoc

Postdoctoral Fellowships for Research in Japan (Standard)
for foreign postdocs intending to start research in Japan

Grants

Postdocs & Faculty Members

KAKENHI
(Kiban S/A/B/C, WAKATE, etc.)

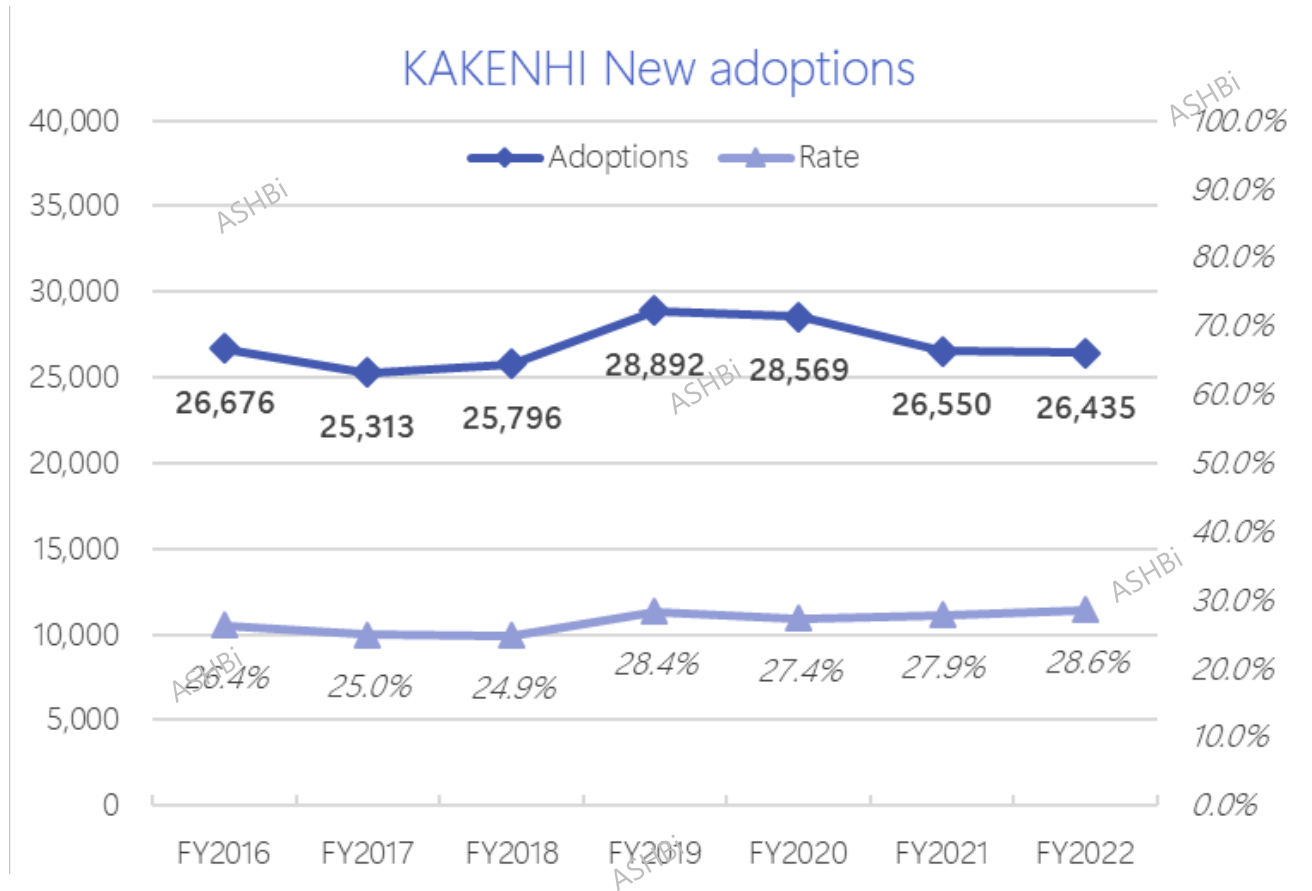# KAKENHI is the largest & most accessible funding program in Japan

Government External Funding
FY2022: 647,939M JPY

Pie chart:
- KAKENHI 37%
- other MEXT 20%
- METI 27%
- MHLW 8%
- Other Ministries 8%

KAKENHI New adoptions

Line chart — Adoptions / Rate:
- FY2016: 26,676 (26.4%)
- FY2017: 25,313 (25.0%)
- FY2018: 25,796 (24.9%)
- FY2019: 28,892 (28.4%)
- FY2020: 28,569 (27.4%)
- FY2021: 26,550 (27.9%)
- FY2022: 26,435 (28.6%)

37% of the govt. competitive funding

over 25,000 proposals are selected each year

https://www8.cao.go.jp/cstp/compefund/

https://www.jsps.go.jp/j-grantsinaid/27_kdata/data/r04/2-1_r4.pdf

"Kiban & WAKATE" are the basic categories for KAKENHI

"Grant-in-Aid (KAKENHI) Program" for

Creative/pioneering research

Specially Promoted Research

Radical transformation of the existing framework

Transformative Research Areas A/B

Scientific Research S/A/B/C (Kiban)

Challenging Research

Early-Career Scientists (WAKATE)

Research Activity Start-up
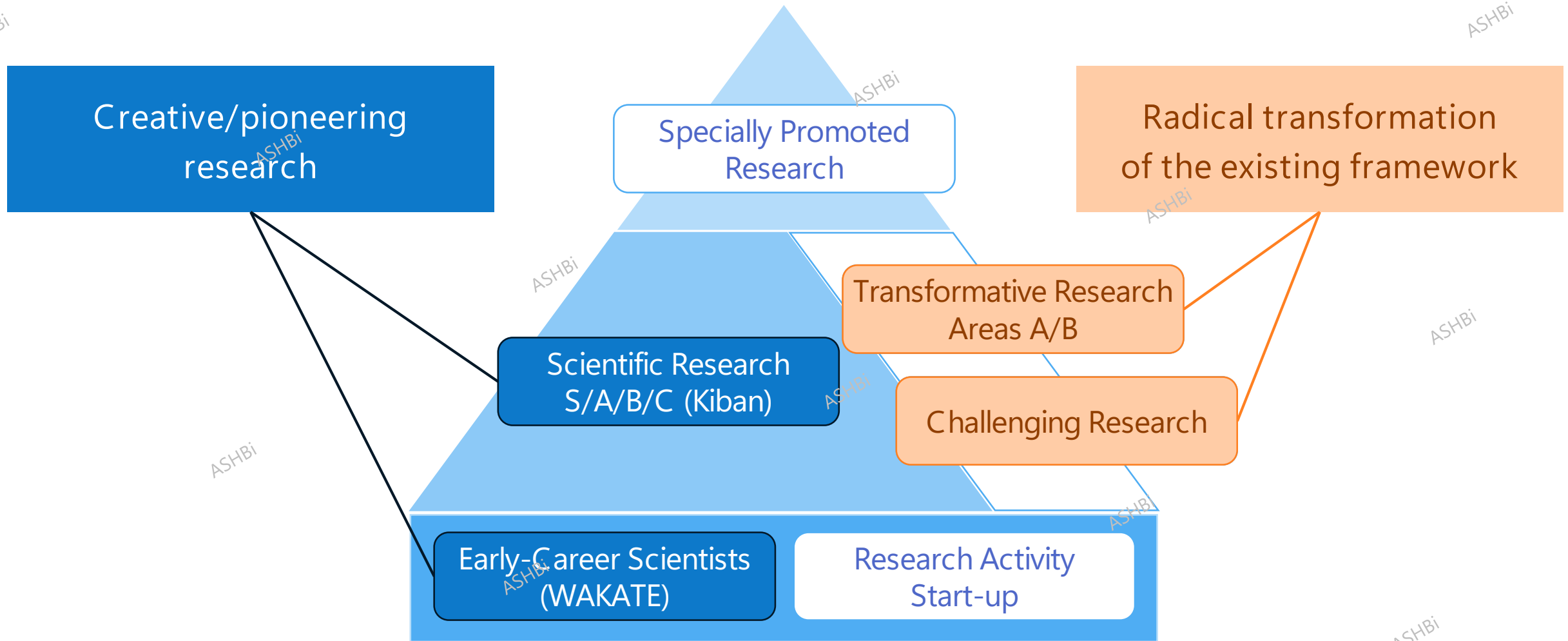
For early-stage researchers, WAKATE/Kiban C are the most suitable

Category	Period	Grant Size *(Total JPY)*	Adoption *(2023)* Number	Adoption *(2023)* Rate
Kiban S	5 years	50〜200 M	70	12.3%
Kiban A	3-5 years	20〜50 M	491	27.2%
Kiban B	3-5 years	5〜20 M	3,234	28.0%
Kiban C	3-5 years	〜5 M	11,991	27.4%
WAKATE *within 8yrs from PhD degree*	2-5 years	〜5 M	5,274	40.4%

+other special categories

You need to apply via the JSPS E-Application System

Login with your e-Rad #
(your researcher ID in Japan)

E-application to funds
KAKENHI, JST grants etc.

**Carry the same ID
even when you transfer**

https://www-shinsei.jsps.go.jp/kaken/english/index.html

To start, contact your univ. admin for
- your e-Rad #
- internal deadline

You need to upload the application set in the E-Application System

WEB SYSTEM

Application Info

WORD

Application Forms (Proposal)

WEB SYSTEM

Budget Plan

E-Application System
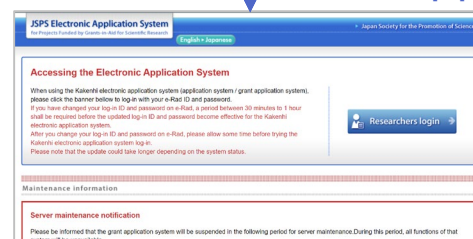
Your Univ. Admin checks and then submits to JSPS

https://www.jsps.go.jp/english/e-grants/grants09_kiban.html

Your Application Forms (Proposal) consist of 3 Parts

Make sure to follow the instructions carefully

e.g.　　　- page limit & font size (over 10pts)
　　　　　- context to be answered for each part

See appendix for instruction details

Application Forms (Proposal)

Part 1
Research Plan

4 pages

Part 2
Feasibility

2 pages

Part 3
Compliance

1 page

https://www.jsps.go.jp/file/storage/kaken_kiban_2023_g730/s-21_e.docx

Summary: Basic Information and application process

KAKENHI Overview	- Eligible to **both Japanese & Foreigners** - Advisable to start from **WAKATE/Kiban C** - Success rate is **30～40%** - JSPS Deadline is **Sep 19** (for WAKATE/Kiban C)	
Application Procedures	- Application via **E-Application system** - Need to obtain **e-Rad number** - Contact **your univ. admin for details**	
Application Forms	- **Research Plan** - **Feasibility** - **Compliance**	4 pages 2 pages 1 page

Today's Agenda

1. Basic Information and Application Process

2. Evaluation System for WAKATE & Kiban C

3. Storytelling: Preparing an Effective Proposal

What is the evaluation process for WAKATE/Kiban C?

You
(Applicant)

Evaluation Process

(Blackbox?)

Selected
40%

Not
Selected
60%

Rabbit Icons: https://chojugiga.com/

WAKATE/Kiban C Applicants are evaluated by 4 reviewers in 2 stages

*Kiban B follows the same process

4 Reviewers

A   B   C   D

You
(Applicant)

1st Stage
Evaluation

Top
30%

Border
20%

Low
50%

2nd Stage
Evaluation

Selected
40%

Not
Selected
60%

Frog & Rabbit Icons: https://chojugiga.com/
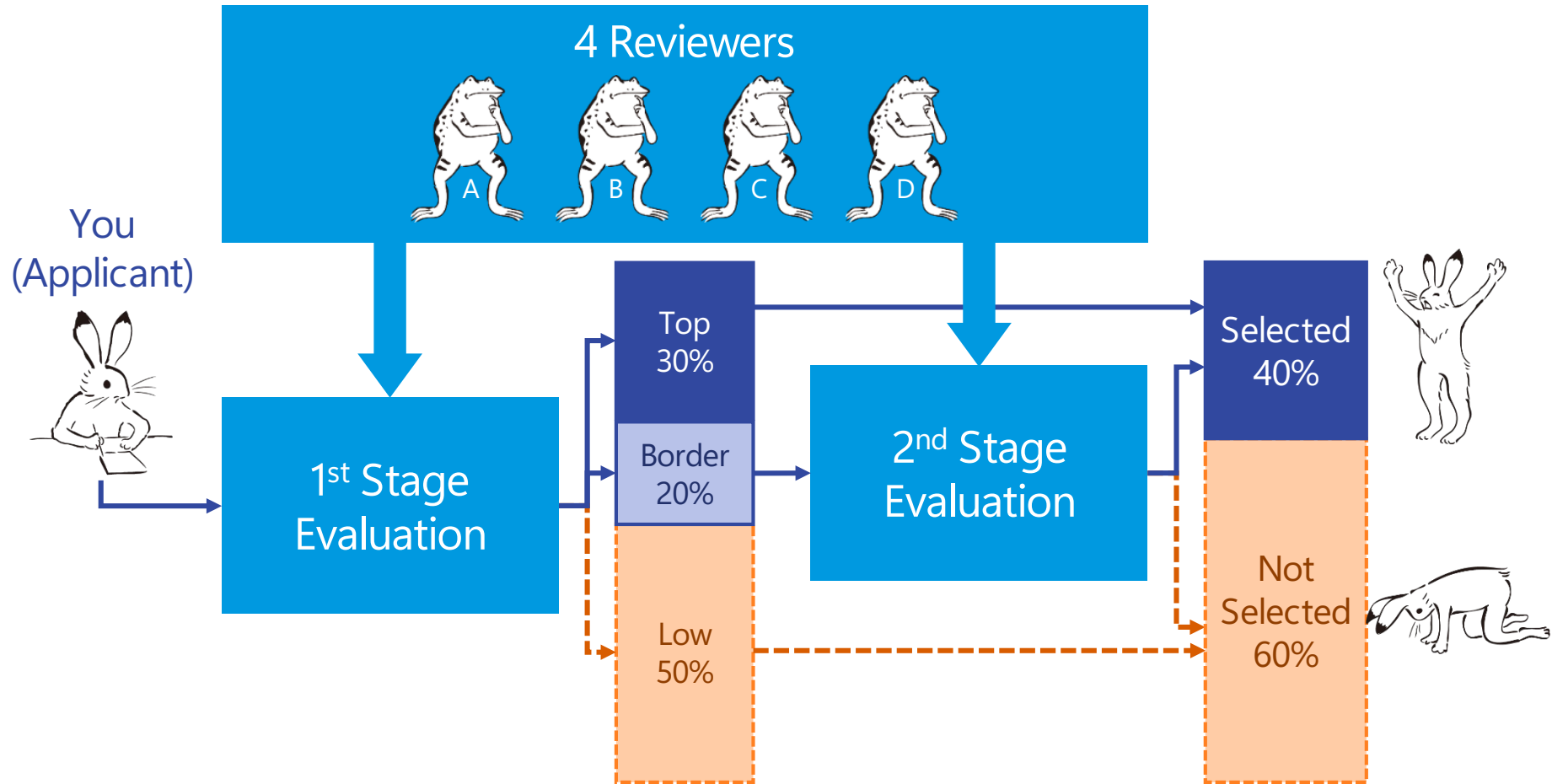
Experts are selected from the "Review Section" which you chose

4 Reviewers

A B C D

You
(Applicant)

Selected
40%

Not
Selected
60%

Frog & Rabbit Icons: https://chojugiga.com/
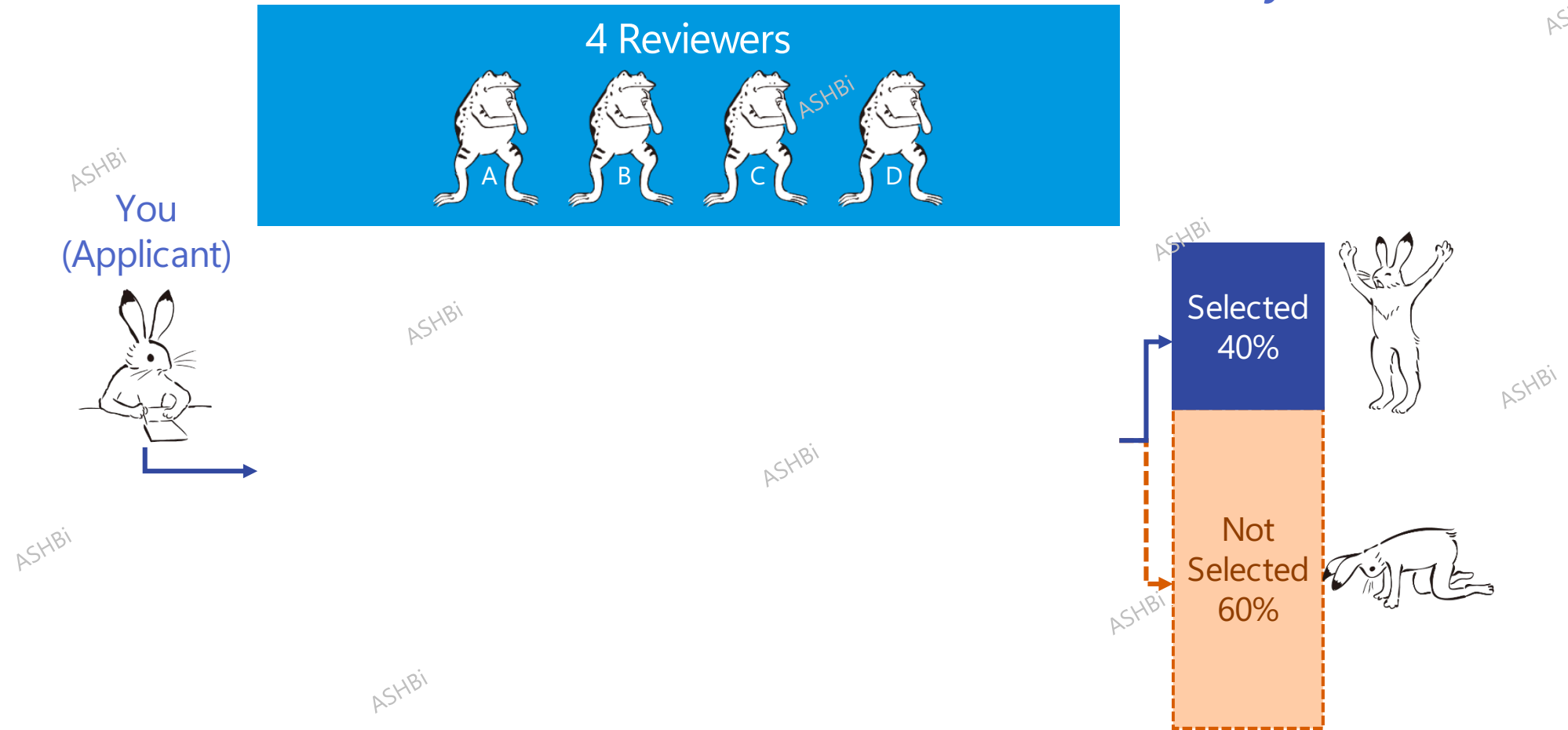
You are to choose from the 306 "Basic Sections" *(each covering a fairly broad field)*

Broad Section G	
Medium-sized Section 43 : Biology at molecular to cellular levels, and related fields	
Basic Section	
43010	Molecular biology-related
43020	Structural biochemistry-related
43030	Functional biochemistry-related
43040	Biophysics-related
43050	Genome biology-related
43060	System genome science-related
Medium-sized Section 44 : Biology at cellular to organismal levels, and related fields	
Basic Section	
44010	Cell biology-related
44020	Developmental biology-related
44030	Plant molecular biology and physiology-related
44040	Morphology and anatomical structure-related
44050	Animal physiological chemistry, physiology and behavioral biology-related
Medium-sized Section 45 : Biology at organismal to population levels and anthropology, and related fields	
Basic Section	
45010	Genetics-related
45020	Evolutionary biology-related
45030	Biodiversity and systematics-related
45040	Ecology and environment-related

44020 Developmental biology-related

Cell differentiation, Stem cells, Regeneration, Germ layer formation, Morphogenesis, Organogenesis, Fertilization, Germ cells, Developmental genetics, Evolution and development, etc.

Experts in Basic Section "44020"

A   B   C   D
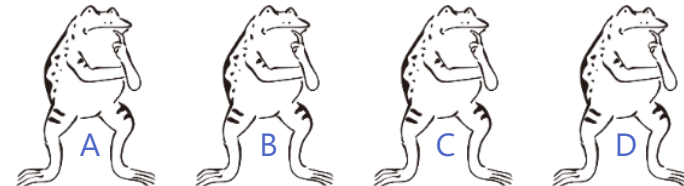
Reviewers are experts but may not be from your "specific" field

Past reviewer info can be helpful in choosing your Review Section

Broad Section G

Medium-sized Section 43: Biology at molecular to cellular levels, and related fields

Basic Section	
43010	Molecular biology-related
43020	Structural biochemistry-related
43030	Functional biochemistry-related
43040	Biophysics-related
43050	Genome biology-related
43060	System genome science-related

Medium-sized Section 44: Biology at cellular to organismal levels and related fields

Basic Section	
44010	Cell biology-related
44020	Developmental biology-related
44030	Plant molecular biology and physiology-related
44040	Morphology and anatomical structure-related
44050	Animal physiological chemistry, physiology and behavioral biology-related

Medium-sized Section 45: Biology at organismal to population levels and anthropology, and related fields

Basic Section	
45010	Genetics-related
45020	Evolutionary biology-related
45030	Biodiversity and systematics-related
45040	Ecology and environment-related

Past reviewers are disclosed
(provided only in Japanese)

FY2020 審査第四部会第44020小委員会

［発生生物学関連］

機関・部局・職	氏名
九州大学・医学研究院・教授	ハヤシ カツヒコ 林　克彦
首都大学東京・理学研究科・准教授	フクダ キミコ 福田　公子
東北大学・生命科学研究科・教授	クマノ ガク 熊野　岳
北里大学・一般教育部・准教授	ワダ ヒロノリ 和田　浩則

FY2019 審査第四部会第44020小委員会

［発生生物学関連］

機関・部局・職	氏名
九州大学・医学研究院・教授	ハヤシ カツヒコ 林　克彦
熊本大学・大学院生命科学研究部・准教授	オオタ クニマサ 太田　訓正
首都大学東京・理学研究科・准教授	フクダ キミコ 福田　公子
東北大学・生命科学研究科・教授	クマノ ガク 熊野　岳

https://www.jsps.go.jp/english/e-grants/data/09/2023/review_section_table_e.pdf

https://www.jsps.go.jp/j-grantsinaid/14_kouho/meibo.html

Past selections can also be helpful in choosing your Review Section

You can search for past projects using KAKENHI Database (KAKEN)

https://www.jsps.go.jp/english/e-grants/data/09/2023/review_section_table_e.pdf

https://kaken.nii.ac.jp/en/

Sorting is done by the "Overall Score"

You
(Applicant)

Evaluate
"ALL"
applications

Top
30%

Border
20%

Low
50%

Re-Evaluate
"Border-lines"
Only

Selected
40%

Not
Selected
60%

Rabbit Icons: https://chojugiga.com/
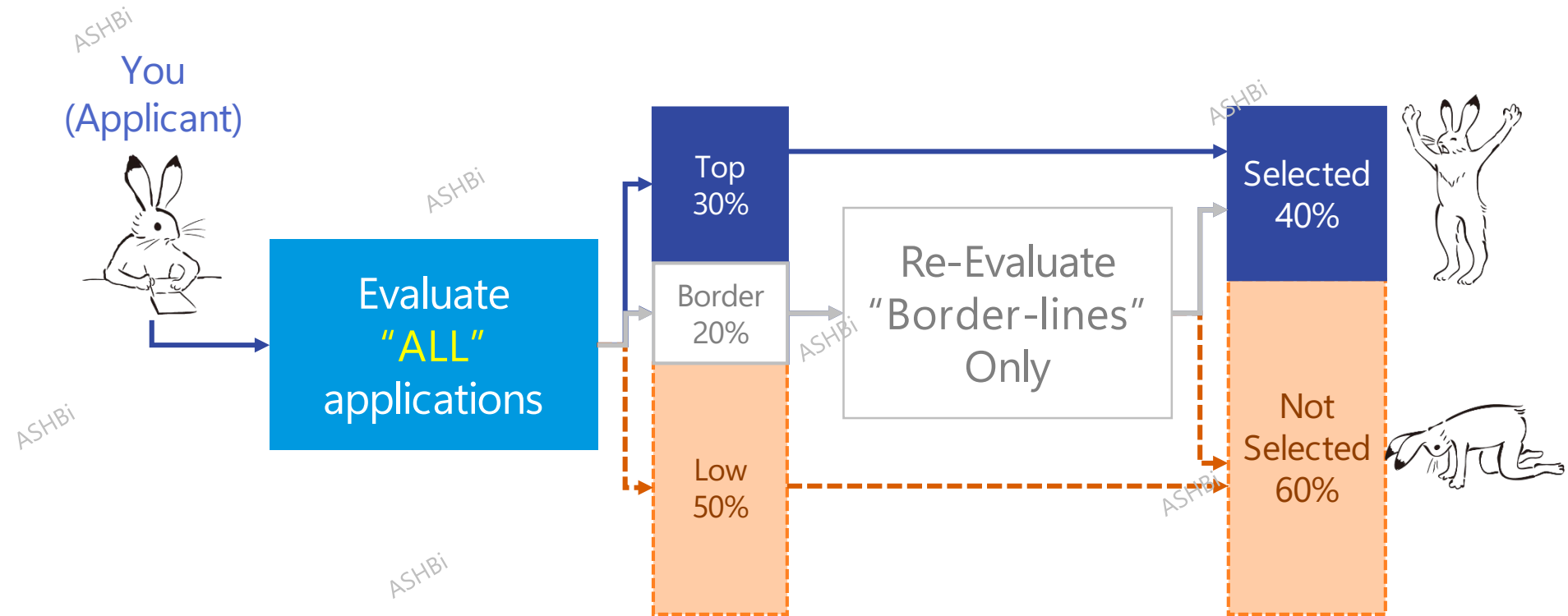
4 Reviewers' "Overall Score" Average is used for selection

Applicant

Overall Score
(sorting the application)

1	2	3	4
30%	40%	20%	10%

Poor

Excellent
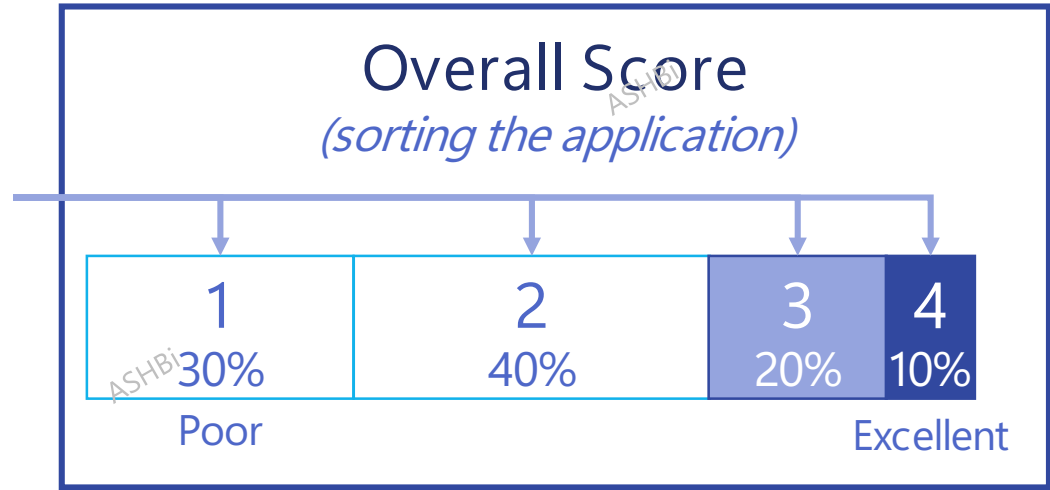
3 Rating Elements
(absolute rating)

Academic Importance

Validity
of Methods

Appropriateness
of Researcher/Environment

Rabbit Icons: https://chojugiga.com/

Summary of Evaluation Systems

Evaluation System	- **2 stage** document review *Most are decided in 1ˢᵗ stage (1 chance)* Your proposal needs to be understood properly
Reviewers	- **306 Basic Sections** - **4 Reviewers** *Reviewers may not be experts of your specific field* Your proposal needs to be in easy-to-understand format

Scoring System	- **Overall Score + 3 Rating Elements**
	
	  - **Academic Importance**
	
	  - **Validity** of Methods
	
	  - **Appropriateness** of Researcher/Environment

Today's Agenda

1. Basic Information and Application Process

2. Evaluation System for WAKATE & Kiban C

3. Storytelling: Preparing an Effective Proposal

What Makes an Effective Grant Proposal?

Effective Storytelling

helps the reviewer to grasp with your story

Wow! I can
easily comprehend
this story!

Frog Icons: https://chojugiga.com/

Why is storytelling important?

Focused Issue

Your Research

Focused Findings

You
(Applicant)

Your point of view

Research Plan

Specific Issue

Methods
(Unique/Solid)

Expected Findings
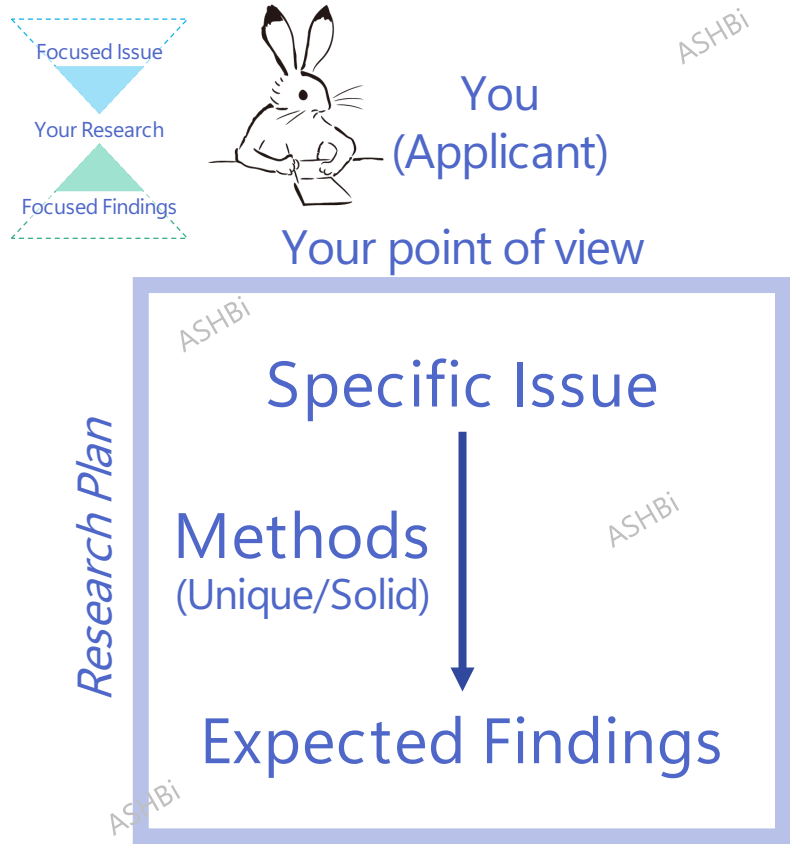
You need a reviewer's point of view!

Rabbit Icons: https://chojugiga.com/

You need to connect your & reviewer's point of view

You (Applicant)
Your point of view

Focused Issue
Your Research
Focused Findings

Research Plan

Specific Issue

↓

Methods
(Unique/Solid)

↓

Expected Findings

Reviewer
Reviewer's point of view

Large Issue
Your Research
Large Impact

Academic Importance

Validity
of Methods

Appropriateness
of Researcher/Environment
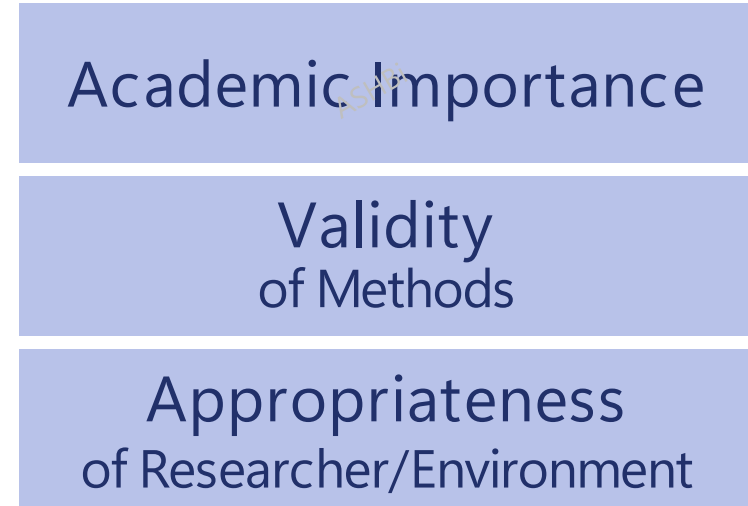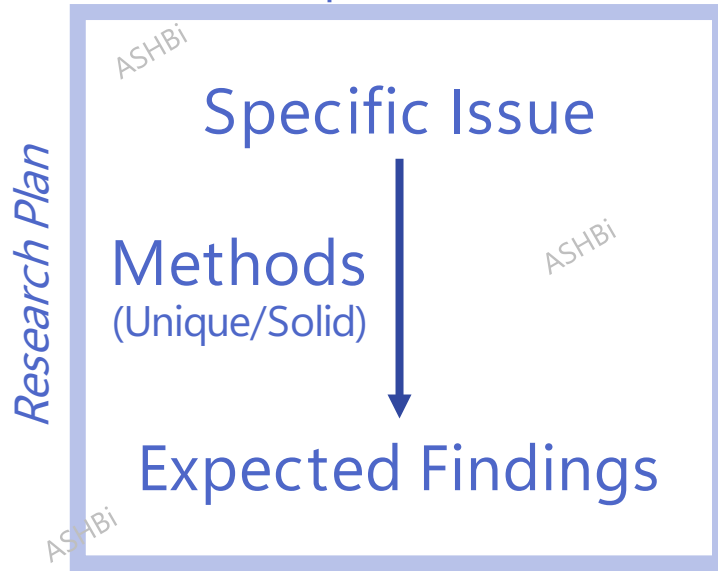
You need to satisfy both point of view

Frog & Rabbit Icons: https://chojugiga.com/

Academic Importance: Why should others listen to your story?

Shida's Interpretation

Large Unsolved Issue

↓

Critical Problem

Academic Importance

Validity
of Methods

Appropriateness
of Researcher/Environment

Expected Findings

↓

Large Potential Impact
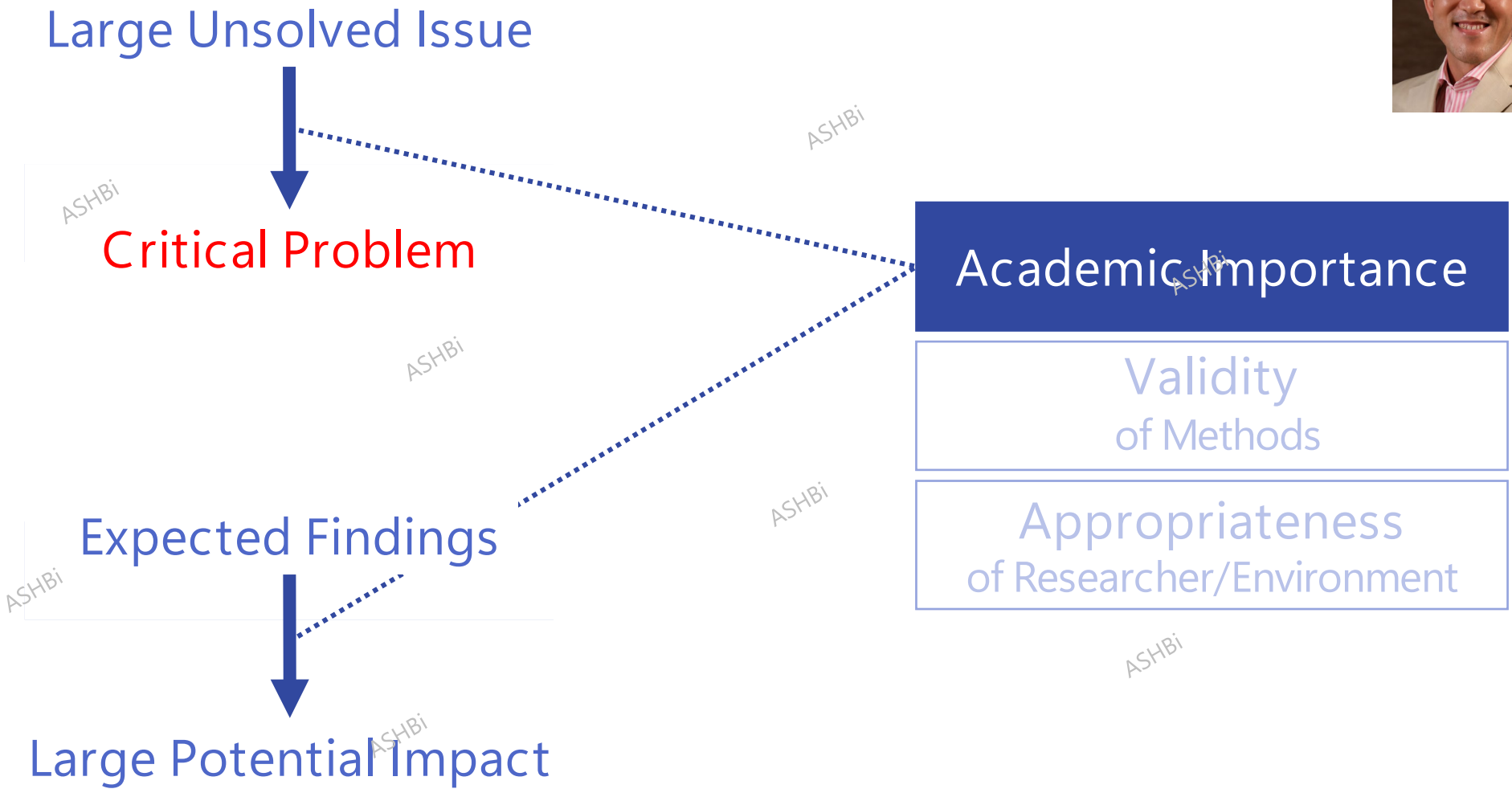
Validity & Appropriateness: Why is your plan feasible?

Shida's Interpretation

Large Unsolved Issue

Research Plan

Critical Problem

Methods
(Unique/Solid)

Expected Findings

Large Potential Impact

Feasibility of your

Research Plan

Ability/Expertise

Research Environment

Academic Importance

Validity
of Methods

Appropriateness
of Researcher/Environment
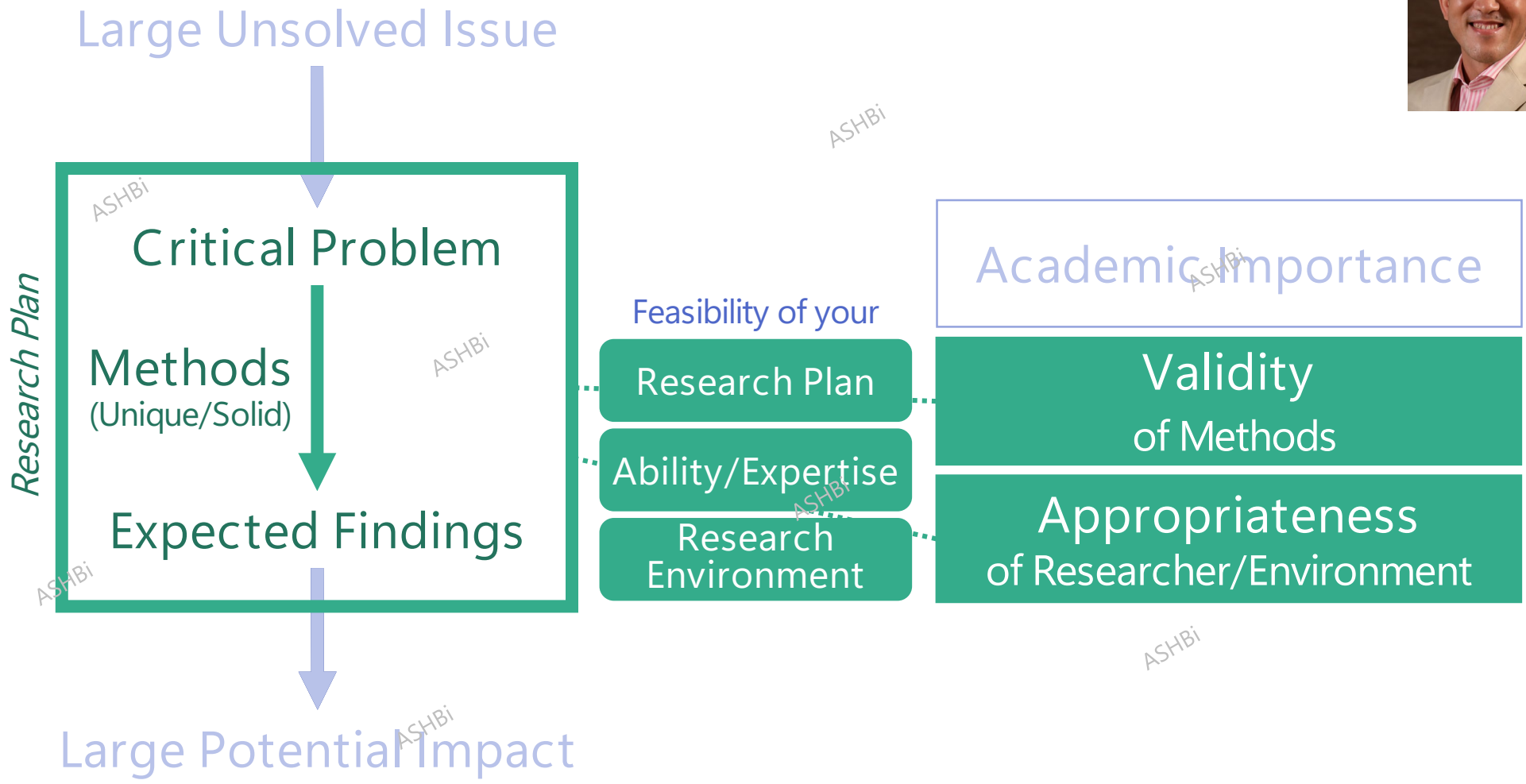
Good storyline has the "Hourglass" structure

Shida's Interpretation
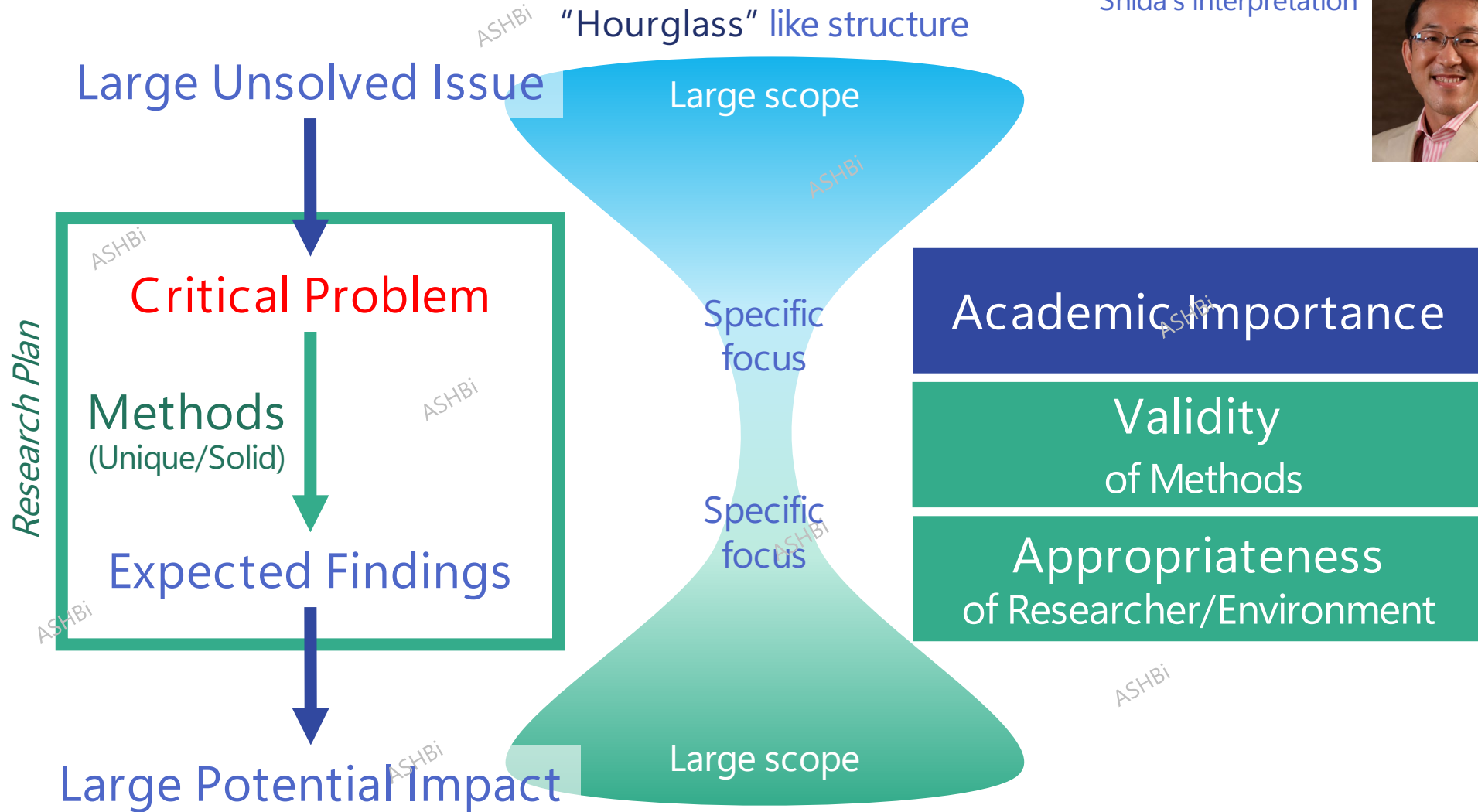
"Hourglass" like structure

Large Unsolved Issue

Large scope

Research Plan

Critical Problem

Methods
(Unique/Solid)

Expected Findings

Specific focus

Academic Importance

Validity
of Methods

Specific focus

Appropriateness
of Researcher/Environment

Large Potential Impact

Large scope

Modified from Scanlan C, "The hourglass: serving the news, serving the reader" Poynter, 2003
https://www.poynter.org/reporting-editing/2003/the-hourglass-serving-the-news-serving-the-reader/

Make a convincing storyline by incorporating the "3 elements"
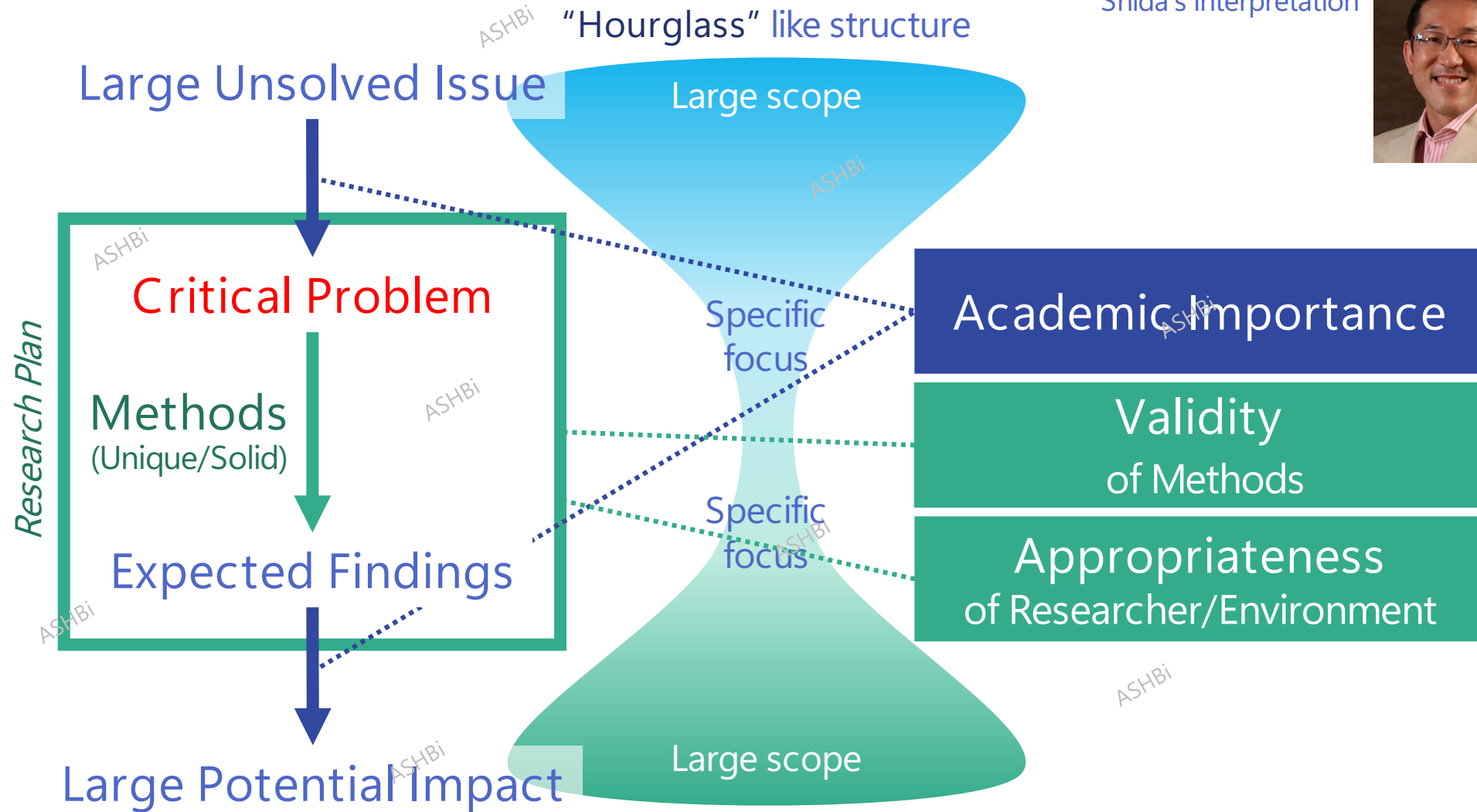
"Hourglass" like structure

Large Unsolved Issue

Large scope

Research Plan

Critical Problem

Specific focus

Academic Importance

Methods
(Unique/Solid)

Validity
of Methods

Specific focus

Expected Findings

Appropriateness
of Researcher/Environment

Large Potential Impact

Large scope

Modified from Scanlan C, "The hourglass: serving the news, serving the reader" Poynter, 2003
https://www.poynter.org/reporting-editing/2003/the-hourglass-serving-the-news-serving-the-reader/

Useful tips in preparing an effective proposal

Tip #1   Grant Writing is different from Paper Writing

Tip #2   Organize your story using an outline framework

Tip #3   Identify your "Key Scientific Question"

Tip #4   Visualize your plan using "figures & diagrams"

Tip #5   Guide the eyes with "Easy-to-understand" structure

Tip #6   Obtain Third Person's View via Feedback

Tip #1 Grant Writing is different from Paper Writing

Paper Writing	vs	Grant Writing
Past oriented Work that has been done		**Future** oriented Work that should be done
Theme-centered Theory and thesis		**Project-centered** Objectives and activities
Specialized terminology "Insider jargon"		**Accessible** Language Easily understood
Expository rhetoric **Explaining** to the reader		**Persuasive rhetoric** "**Selling**" to the reader

Modified from Porter R, "Why Academics Have a Hard Time Writing Good Grant Proposals"
The Journal of Research Administration, vol 38, 2, 2007

In Grant Writing, you need to sell "your future plan"

Tip #2 Organize your story using an outline framework

Sample of an Outline Framework

Past	Present	Future
① **Introduction/Issue** Common knowledge, scientific background, etc.	③ **Your idea/solution** Theme of your proposal	⑤ **Expected Findings** What can be achieved
② **Critical Problem** Unmet needs of other research (domestic/global)	④ **Your strength** Key findings, research environment	⑥ **Potential Impact** to Science & Society

小野英理 "科研費研究計画調書のグラフィックデザイン" 2019

Check to see if you have "every component" in your story

Tip #3 Identify your "Key Scientific Question"

In KAKENHI, you need to clarify your "Key Scientific Question"

A good question/problem distinguishes your proposal from others!
→ It enhances the significance/originality of your study
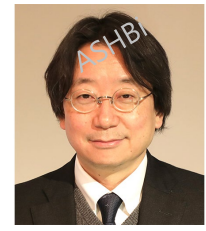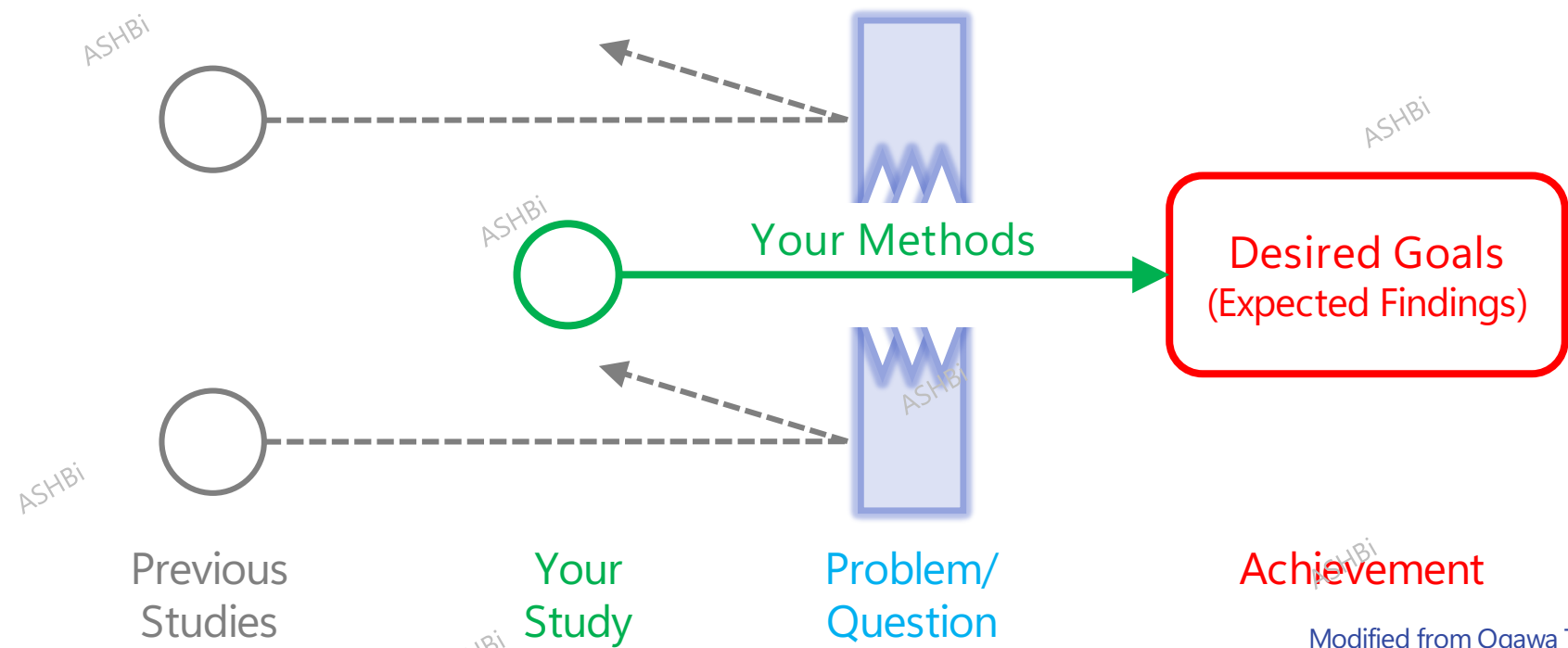
Tadashi Ogawa
Admin. Director
WPI-ASHBi

Your Methods

Desired Goals
(Expected Findings)

Previous
Studies

Your
Study

Problem/
Question

Achievement

Modified from Ogawa T, "My experience as a reviewer"
KAKENHI Preparation in Advance, 2018

Make a question of which your method is the "best way" to success
while showing the "difficulty" in other methods

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Tip #4 Visualize your plan using "figures & diagrams"

e.g. Conceptual diagram

Overview and Key Question

Scientific background leading to the problem which needs to be solved

3 possible factors of the problem

| Factor X | Factor Y | Factor Z |

↓ ↓ ↓

Critical Problem

What is the key factor and the mechanism of this problem?

e.g. Project timeline

	Year 1	Year 2	Year 3	
Theme 1 Identification of the Key Factors	Article search	Field Study	Extraction of Key Factors	Submit Paper
Theme 2 Elucidating the Function of each Key Factors	Analyzing Known Factor	Comparative Evaluation	Mini Workshop	Feedback Analysis
Theme 3 Elucidating the Mechanism of the problem			Systematic Integration	Workshop with global experts

Modified from Ono E, "科研費研究計画調書のグラフィックデザイン", K-CONNEX Seminar, 2017

Make sure to prepare them in grayscale!

Visualizing your storyline will enable reviewers to capture the story at a glance

Tip #5 Guide the eyes with "Easy-to-understand" structure

50+ proposals × 7p= = over 350p!!

Family

Research

It's easy to follow!

Form S-13: Research Proposal Document (forms to be uploaded)

Scientific Research (B) (General) 1

1. Research Objectives, Research Method, etc.

This research proposal will be reviewed in the Basic Section of the applicant's choice. In filling this application form, refer to the Application Procedures for Grants-in-Aid for Scientific Research -KAKENHI-.

In this column, research objectives, research method, etc. should be described within 3 pages. A succinct summary of the research proposal should be given at the beginning.

The main text should give descriptions, in concrete and clear terms, of (1) scientific background for the proposed research, and the "key scientific question" comprising the core of the research plan, (2) the purpose, scientific significance and originality of the research project, and (3) what will be elucidated, and to what extent and how will it be pursued during the research period.

If the proposed research project involves Co-Investigator(s), a concrete description of the role-sharing between the Principal Investigator and the Co-Investigator(s) should be given.

[SUMMARY] *Describe in about 10 lines

Summary

[MAIN TEXT]

Heading

Scientific Research (B) (General) 2

[1. Research Objectives, Research Method, etc. (continued from the previous page)]

Subheading

Subheading

Subheading

Figure

Modified from Ogawa T, "My experience as a reviewer" KAKENHI Preparation in Advance, 2018

Place the summary, headers and figures effectively
to help guide reviewers' eyes

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Tip #6 Obtain Third Person's View via Feedback

Check to see how much of your proposal is understood by others

What do you mean by this?

What's the important part of this proposal?

URA

Colleague

You

Hmm...
How can I modify my story to make it more easily understood...
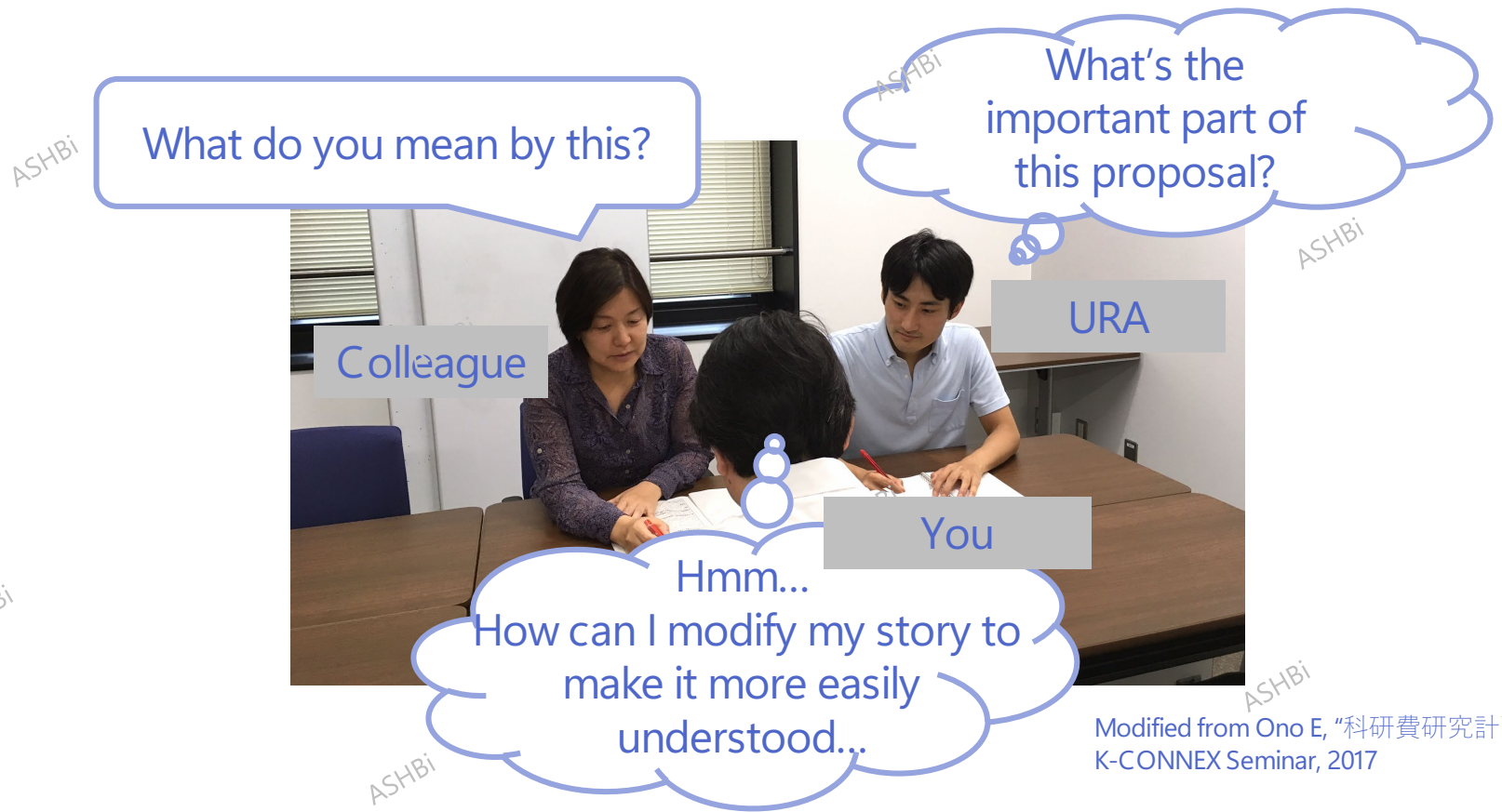
Modified from Ono E, "科研費研究計画調書のグラフィックデザイン", K-CONNEX Seminar, 2017

The reader of your research story is the reviewer, not you

Acknowledgements

ASHBi Research Acceleration Unit
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Hiromi Inoue
Chieko Chiwata

Providing Materials/Feedbacks
Eiri Ono, IIMC, Kyoto University
Hiromi Sumita, LiMe, Kyoto University

ASHBi Office
Fumi Komori
Narumi Sano

ASHBi
RESEARCH ACCELERATION PROGRAM

ASHBi Research Acceleration Unit provides variety of seminars for early-stage researchers and graduate students!

Plan & Funding	Experiment & Data analysis	Scientific paper writing	Conference presentation	PR & Outreach

Grant application writing

Seminars by journal editors

Paper manuscript writing

Production of scientific Illustrations

News release distribution
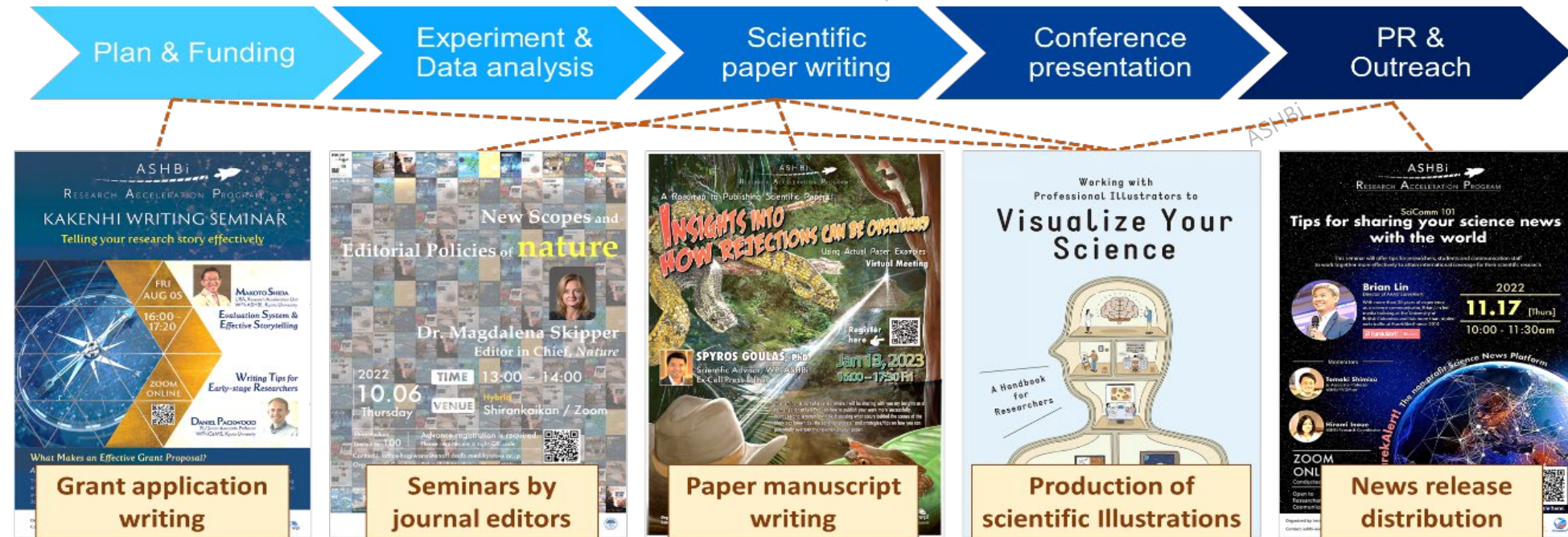
Check here for the program and upcoming seminars!

Please provide your feedback!

Questionnaire link:

https://forms.gle/cgQPbr3h8hc15bnz6

Thank you for your participation

We wish you luck on your application!!

Appendix 1
Instructions for the KAKENHI Research Proposal Document
(sample: WAKATE)

[NOTE] Instruction for Kiban C is also the same

1. Research Objectives, Research Method, etc.

Early-Career Scientists 1

1. Research Objectives, Research Method, etc.

This research proposal will be reviewed in the Basic Section of the applicant's choice. In filling this application form, refer to the Application Procedures for Grants-in-Aid for Scientific Research-KAKENHI-.

Research objectives, research method, etc. should be described within 4 pages.

A succinct summary of the research proposal should be given at the beginning.

The main text should give descriptions, in concrete and clear terms, of (1) scientific background for the proposed research, and the "key scientific question" comprising the core of the research plan, (2) the purpose, scientific originality, and creativity of the research project, (3) the circumstances leading to conception of the present research proposal, domestic and overseas trends related to the proposed research and the positioning of this research in the relevant field, (4) what will be elucidated, and to what extent and how will it be pursued during the research period, and (5) preparation status towards achievement of the purpose of the research project.

https://www.jsps.go.jp/file/storage/kaken_kiban_2023_g730/s-21_e.docx

Notes to observe when preparing the Research Proposal Document

Note 1 :

1. Read and understand the following important notes carefully before preparing your Research Proposal Document. KAKENHI funding aims to promote scientific research in all fields based on original ideas of researchers. The grants provide financial support for creative and pioneering research projects that will become the foundation of social development.

In KAKENHI, research theme setting is at the applicant's discretion. As such, KAKENHI research proposals are evaluated based not only on their scientific significance, but also on their originality and creativity. Accordingly, in the Research Proposal Document forms for the "Scientific Research", "Early-Career Scientists" and "Research Activity Start-up" categories, applicants are required to state:

✓ What kind of key scientific question(s) is set against the relevant scientific background (such as research trends and new developments)?

✓ What are the scientific originality and creativity of the proposal?

✓ What was the circumstances leading to the conception of the research idea?

✓ What are the research trends (domestic and overseas) and the positioning of this research in the relevant field?

In the review process, research proposals will be screened either by Comprehensive Review or Two-Stage Document Review. Reviewers strive to grasp the essence of the proposed research through exchange of opinions among them, evaluate such merits as scientific significance, originality and creativity, and comprehensively place their judgments taking account of the feasibility of the research plan and the applicant's ability to conduct research.

In applying for KAKENHI, applicants are advised to take note of the above, and to read the Application Procedures for Grants-in-Aid for Scientific Research and the explanations of review criteria and the annotations in the application form in preparing their Research Proposal Documents, so that the scientific merits and other points in the research proposal will be appropriately conveyed to the reviewers.

https://www.jsps.go.jp/file/storage/kaken_kiban_2023_g730/s-21_e.docx

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1. Research Objectives, Research Method, etc.

Notes to observe when preparing the Research Proposal Document

Note 2:
1. Read the "Procedures for Preparing and Entering a Research Proposal Document" before preparing this form.
2. Complete the form using font size 10-point or larger.
3. The title and instructions on the upper part of each page should be left intact.
4. Do not exceed the maximum number of pages specified in the instructions. Therefore, if there are any blank page(s), leave them as they are (do not delete any page).

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2. Applicant's Ability to Conduct the Research and the Research Environment

Descriptions of (1) applicant's hitherto research activities, and (2) research environments including research facilities and equipment, research materials, etc. relevant to the conduct of the proposed research should be given within 2 pages to show the feasibility of the research plan by the applicant (Principal Investigator).

If the applicant has taken leave of absence from research activity for some period (e.g. due to maternity and/or child-care), he/she may choose to write about it in "(1) applicant's hitherto research activities".

* Note:

1. *The description in this column is to explain the feasibility of the research plan. On citing research achievements (research papers, books, patents, invited talks, etc.) they should be given not as an exhaustive list but as supporting evidence to prove the applicant's ability to conduct the proposed research.*

2. *Sufficient information should be given so that the reviewers can identify the research achievements. In the case of a research paper, for example, the relevant bibliographic information, including the title of the paper, the author(s), the title and the volume of the journal, the publication year, and the pages of the article should be given.*

3. *The research papers that can be cited are only those already published or accepted for publication.*

https://www.jsps.go.jp/file/storage/kaken_kiban_2023_g730/s-21_e.docx

3. Issues Relevant to the Protection of Human Right and Compliance with Laws and Regulations

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3. Issues Relevant to the Protection of Human Right and Compliance with Laws and Regulations

(*cf.* Application Procedures for Grants-in-Aid for Scientific Research)

> If the proposed research involves such issues that require obtaining the consent and/or cooperation of third parties, consideration in handling of personal information, or actions related bioethics and/or biosafety, including the laws, regulations and the guidelines in the country/region(s) where the joint international research is to be conducted, describe the measures and actions planned to be taken in responding to these issues within 1 page.
>
> This provision applies to research activities that would require approval by an internal or external ethical jury, such as research involving handling of personal information from questionnaire surveys, interviews and/or behavior surveys, including personal histories and images, handling of donated specimens, human genome analysis, recombinant DNA, and experimentation with animals.
>
> If the activities of the proposed research do not fall under such categories, enter "N/A (not applicable)".

Appendix 2
Assessment Criteria for Document Review

Scientific Research (B/C) (Application Section "General") and Early-Career Scientists
Assessment Criteria for Document Review

Grants-in-Aid for Scientific Research (KAKENHI) aim to dramatically develop all academic research, from basics to applications, throughout all research fields. In the review for allotment of research funds, each reviewer is required to make appropriate and fair judgment as to whether the submitted research proposals could contribute greatly to this end.

The Basic Section will be applied for the review. Note that for Grant-in-Aid for Scientific Research (B), any Basic Section with a notably small number of applications will be reviewed jointly with other Basic Sections.

Instead of a panel review, the Two-Stage Document Review method will be implemented where the same group of reviewers will conduct document review in two stages to determine the adoption of research proposals.

https://www.jsps.go.jp/english/e-grants/data/2023/r5hyoutei03_en_general.pdf

Assessment Criteria: Overview

In the first stage review, each research proposal will first be assigned an absolute score for the individual rating elements listed below to assess the content, plan, etc. of the research. Then a relative overall score on a scale of 1 to 4 will be assigned.

Note that, in the absolute evaluation for each rating element, if you assign a score of "2—Marginal" or "1—Poor," you will be asked to select which item of the rating element was considered "Marginal" or "Poor," and to give the reason for such judgment. The items selected here will be disclosed to unsuccessful applicants who have made prior request for disclosure of the results of the first stage review.

In the second stage review, the same group of reviewers will assess the research proposals that qualified for the second stage review based on the results of the first stage document review, and assign new scores for the second stage. Here, you should check the review comments (for the first stage) etc. made by all the reviewers assessing the same research proposal, and assign a score based on your own insight.

The adoption of research proposals and allocation of research funds will be determined based on these scores, etc.

Assessment Criteria: Overview

In conducting the review, you do not necessarily have to give high scores to research proposals that marked high scores in all of the individual elements. You are asked to conduct appropriate assessments so as to discover significant research projects over a wide range and enable the progress of scientific research while giving consideration to the diversity of research such as characteristics of the fields.

Note that you must not conduct reviews of research proposals submitted by any research team consisting of researchers whom you have vested interests.

Assessment Criteria: 3 Rating Elements

[Rating Element 1]
Academic Importance of the Research Proposal

(1) Academic Importance of the Research Proposal

- Is the research proposal an <u>important research project that should be promoted from a scientific perspective?</u>
- Is the <u>"key research question or issue"</u> comprising the core of the research project clearly stated? Is it <u>original and creative?</u>
- Does the research proposal clearly show the <u>circumstances leading to this research proposal</u>, <u>global research trends</u>, and the <u>positioning of this research</u> within the relevant domain or field?
- By conducting the proposed research project, could we <u>expect positive effects on broader fields, science and technology, the society or other areas?</u>

Assessment Criteria: 3 Rating Elements

(2) Validity of the Research Method

   - Is the <u>research method, etc. specific and appropriate to achieve the research objective?</u> Also, are the research <u>expenditures consistent with the research plan</u>?

   - Is the state of <u>preparation appropriate to achieve the research objective?</u>

Assessment Criteria: 3 Rating Elements

[Rating Element 3]
Appropriateness of Ability and Research Environment to Conduct Research

(3) Appropriateness of Ability and Research Environment to Conduct Research

- Judging from the research activities, etc. conducted over the years, does the applicant possess sufficient ability to carry out the research plan?

- Has the applicant secured a research environment that he/she needs to conduct the research plan including research facilities, equipment, and research materials?

Assessment Criteria: First Stage Review

[Overall Scores in the First Stage Review]

To determine the adoption of each research proposal, make a <u>comprehensive judgment focusing on the rating elements (1) through (3)</u> above, and <u>assign an overall score on a scale of 1 to 4 in accordance with the scoring distribution</u> shown in the right column in the table below. (This may not be the case if you are asked to review a small number of research proposals.)

If you have "vested interests" in a research proposal, enter the reason in the "Reason for Vested Interests" column.

Also note that <u>"The Status of Application and Acquisition of Research Grants" and "Issues Relevant to Human Rights Protection and Legal Compliance" columns in the research proposal document are not to be considered for the overall score given in the document review</u>. As such, you should assign the overall score based on each of the other columns, etc. Please check the section iii. Points to be Noted on how to handle "The Status of Application and Acquisition of Research Grants" and "Issues Relevant to Human Rights Protection and Legal Compliance" columns in the review process.

Assessment Criteria: First Stage Review

[Review Comments in the First Stage Review]

In the first stage review, you must give your review comments in the "Review Comments" column for every research proposal, focusing on the strengths and weaknesses of each research proposal. Note that you will not be required to provide review comments in the second stage review.

The review comments will be disclosed to other reviewers to help each reviewer gain better understanding on the research proposals when assigning new overall scores in the second stage review.

Assessment Criteria: Second Stage Review

[Overall Scores in the Second Stage Review]

To determine the adoption of each research proposal that qualified for the second stage review based on the results of the first stage document review, make a comprehensive judgment focusing on the rating elements (1) through (3) above. Check also the review comments, etc. provided by all reviewers who are reviewing the same research proposal. Then assign an overall score on a scale of 1 to 4 in accordance with the scoring distribution shown separately as indicated in the right column in the table below.

Note that research proposals that were ranked close to the planned adoption threshold as a result of the first stage document review, and research proposals that were assigned extremely low scores by certain reviewers will also be considered when determining the eligibility for the second stage review.

Also note that "The Status of Application and Acquisition of Research Grants" and "Issues Relevant to Human Rights Protection and Legal Compliance" columns in the research proposal document are not to be considered for the overall score given in the review. As such, you should assign the overall score based on each of the other columns, etc. Please check the section iii. Points to be Noted on how to handle "The Status of Application and Acquisition of Research Grants" and "Issues Relevant to Human Rights Protection and Legal Compliance" columns in the review process.

Validity of Research Expenditures

In order to ensure effective and efficient allocation of KAKENHI funding, please consider the criteria listed below with respect to the validity and necessity of research expenditure. If you find a flaw in the content of the research expenditure and think that the sufficiency rate should be reduced, assign a "x" to the research proposal. The sufficiency rates for research proposals that were marked "x" by more than one reviewer will be set below the average sufficiency rate.

-Is the content of research expenditure reasonable and can we expect that the research expenditure will be used effectively?
-Are items genuinely necessary for the implementation of the research plan properly budgeted, such as costs for purchasing equipment?
-If any of the expenditure categories (equipment costs, travel expenses, or personnel cost/honoraria) exceeds 90% of the total expenditure, can we expect that the research expenditure will be used effectively for the implementation of the research plan?

https://www.jsps.go.jp/english/e-grants/data/2023/r5hyoutei03_en_general.pdf

Appendix 3
Other KAKENHI references

Restriction on Parallel Grant Application

If you wish to apply for multiple categories, check the restriction chart before application

Example of an restriction chart (excerpt from the original chart)

1−1) Type "Principal Investigator (New Proposal/Continued) (Column A) → Principal Investigator (Column B)"

Column B — Applicable or Not (all New Proposal, PI)

Column A (Already have or have applied for)			Specially Promoted Research	Scientific Research (S)	Scientific Research (A) General	Scientific Research (B) General	Scientific Research (C) General	Early-Career Scientists (First Time)	Early-Career Scientists (Second Time)*1	Transformative Research Areas (A)*3 Administrative Group	Transformative Research Areas (A)*3 Planned Research	Transformative Research Areas (A)*3 Publicly Offered Research	Transformative Research Areas (B) Administrative Group	Transformative Research Areas (B) Planned Research	Challenging Research Pioneering	Challenging Research Exploratory	Fostering Joint International Research (B)*4
Scientific Research (B)	General	New Proposal (PI)	□	×	×	−	×	×	■								
	General	Continued (PI)	□	▲		−	▲	▲	▲								
	Overseas Scientific Investigation	Continued (PI)	□	▲	★	★	★	▲	▲								▲
	Generative Research Fields	Continued (PI)	□	□						□	□		□	□	▲	▲	
Scientific Research (C)	General	New Proposal (PI)	□	×	×	×	−	×	×						×	×	
	General	Continued (PI)	□	▲	▲	▲	▲	▲	▲						▲	▲	
	Generative Research Fields	Continued (PI)	□	□						□	□		□	□	▲	▲	
Early-Career Scientists		New Proposal (First Time) (PI)	□	×	×	×	×	−	×						×	×	□
		New Proposal (Second Time)*1 (PI)	□	□	□	□	×	−	−							×	□
		Continued (First Time) (PI)	□	▲	▲	▲	▲	−	−						▲	▲	▲
		Continued (Second Time)*2 (PI)	□	▲	▲	▲	▲	−	−							▲	▲
Challenging Research	Pioneering	New Proposal (PI)	□				×	×		×	×	×			−	×	
	Pioneering	Continued (PI)	□				▲	▲		▲	▲	▲			−	▲	
	Exploratory	New Proposal (PI)	□				×	×							×	−	
	Exploratory	Continued (PI)	□				▲	▲	▲						▲	−	

Can you apply for the "Column B" category?

[Blank]: Yes *(can receive both)*
■: Yes, but priority is on A *(cannot receive both)*
□: Yes, but priority is on B *(cannot receive both)*
−: No
×: No
▲: No
★: No

Original chart https://www.jsps.go.jp/file/storage/kaken_kiban_2023_g730/table_of_restriction_e.pdf

Review Section Table

You are to select "one" review section from the chart which suits you the most

March 9, 2022

Subdivision on Research Grant Screening Section of the Academic Deliberation
in the Subdivision on Science, Council for Science and Technology

For the "Basic Sections" below, the reviewers may consist of experts from different Medium-sized & Broad Sections

【Basic sections may be presented in plural Medium-sized and Broad Section】

Basic Section Item	Basic Section Description	Medium-sized Sections corresponding Basic Sections	Broad Sections corresponding Basic Sections
02090	Japanese language education-related	2, 9	A
02100	Foreign language education-related	2, 9	A
80010	Area studies-related	4, 6	A
80020	Tourism studies-related	4, 7, 8	A
80030	Gender studies-related	4, 6, 8	A
80040	Quantum beam science-related	14, 15	B
90010	Design-related	1, 23, 61	A, C, J
90020	Library and information science, humanistic and social informatics-related	2, 62	A, J
90030	Cognitive science-related	10, 61	A, J
90110	Biomedical engineering-related	90	D, I
90120	Biomaterials-related	90	D, I
90130	Medical systems-related	90	D, I
90140	Medical technology assessment-related	90	D, I
90150	Medical assistive technology-related	90	D, I

Original chart https://www.jsps.go.jp/file/storage/kaken_kiban_2023_g730/review_section_table_e.pdf

Past Selection Results: Adoption Data (Numbers, Allocation)

From the chart, you can observe that the adoption rates are similar between "all" Review Sections

Acceptance rate for each broad sections *(all category combined, FY2022 new adoptions)*

Section	Reseearch Fields	Applications	Accepted	Acceptance Rate	Composition
A	Philosophy, Literature, History, Geography, Law, Political science, Economics, Sociology, Education, Psychology related fields	16,991	5,368	**32%**	*21%*
B	Algebra, Analysis, Condensed matter physics, Plasma science, Particle-/nuclear-/astro-physics, Earth and planetary sciece related fields	5,370	1,459	**27%**	*6%*
C	Mechanics of materials, Fluid engineering, Electrical and electronic engineering, Civil engineering, Architecture, Aerospace engineering, Social systems engineering related fields	7,019	1,865	**27%**	*7%*
D	Materials engineering, Chemical engineering, Nano/micro science, Applied condensed matter physics, Applied physics and engineering, Nuclear/earth resources engineering, Biomedical engineering related fields	5,562	1,359	**24%**	*5%*
E	Physical chemistry, Organic chemistry, Inorganic/coordination chemistry, Polymers, Inorganic chemistry, Biomolecular chemistry related fields	4,187	1,040	**25%**	*4%*
F	Agricultural chemistry, Agricultural and evironmental biology, Forestry and forest products science, Agricultural economics and rural sociology, Veterinary medical science related fields	5,860	1,517	**26%**	*6%*
G	Biology at molecular to cellular levels, Biology at cellular to organism levels, Biology at organismal to poppulation levels related fields	4,851	1,254	**26%**	*5%*
H	Pharmaceutical sciences, Biomedical structure and function, Pathology and infection/immunology related fields	4,612	1,237	**27%**	*5%*
I	Oncology, Brain sciences, General internal medicine, Organ-based internal medicine, Internal medicine of the bio-information integration, Surgery of the organs maintaining homeostasis, Surgery related to bioogical and censory functions, Oral science, Society medicine, Sports sciences, physical education, Biomedical engineering related fields	28,818	8,467	**29%**	*34%*
J	Information science and computer engineering, Human informatics, Applied informatics related fields	3,787	1,026	**27%**	*4%*
K	Environmental analyses and evaluation, Environmental conservation related fields	1,795	452	**25%**	*2%*
Total		88,852	25,044	**28%**	*100%*

Modified from https://www.jsps.go.jp/j-grantsinaid/27_kdata/data/r04/3-2_r4.pdf

Past Selection Results: KAKEN Database

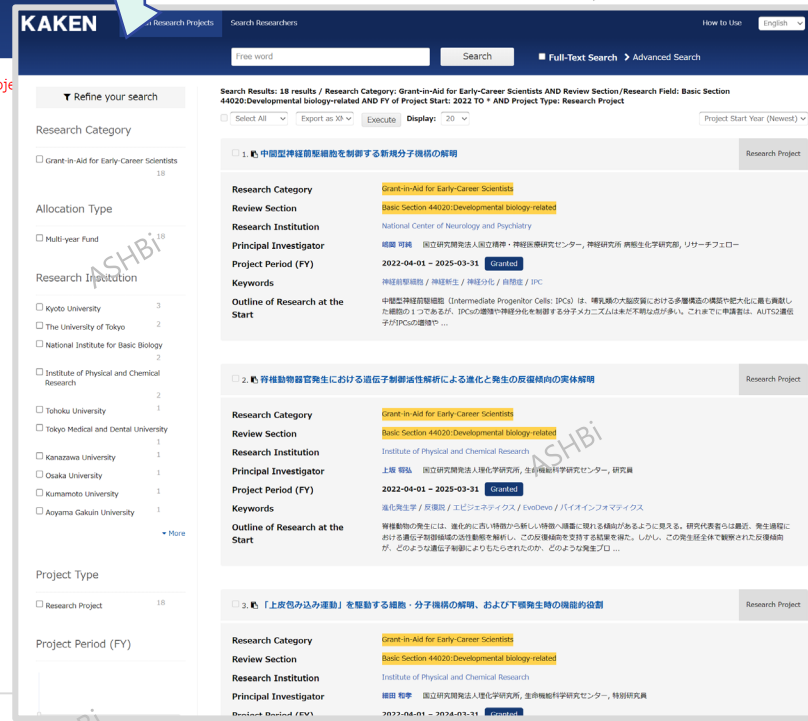From the website, you can search for past adopted projects for each Review Sections
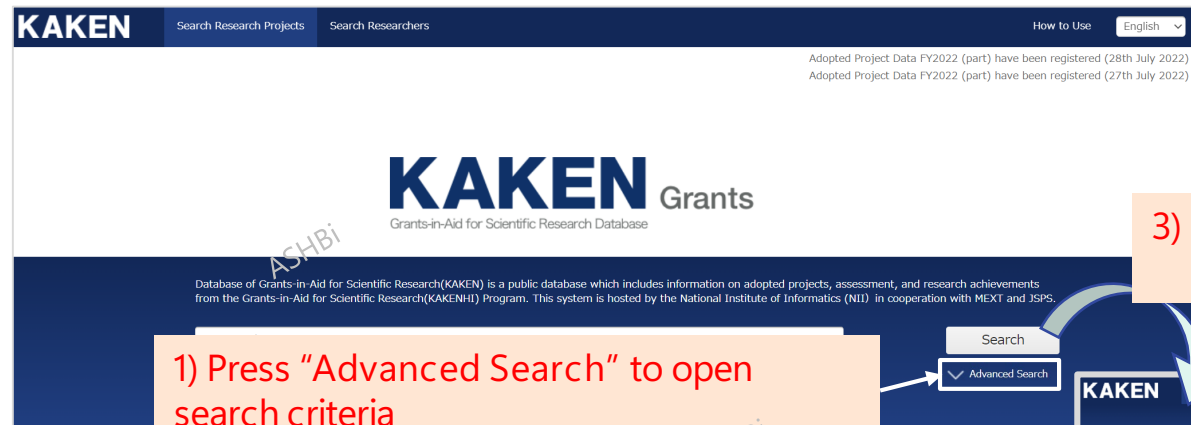
1) Press "Advanced Search" to open search criteria

2) Select your category, review section, etc.

3) Press "Search" to check adopted projects. Title, Investigator, Outline can be found

Original DB found at
https://kaken.nii.ac.jp/en/

KAKENHI Useful links

- KAKENHI proposal documents
   https://www.jsps.go.jp/english/e-grants/grants09_kiban.html

- Restriction on Parallel Grant Application
   https://www.jsps.go.jp/file/storage/kaken_kiban_2023_g730/table_of_restriction_e.pdf

- KAKENHI Review Section Table
   https://www.jsps.go.jp/file/storage/kaken_kiban_2023_g730/review_section_table_e.pdf

- KAKENHI past reviewer list (in Japanese)
   https://www.jsps.go.jp/j-grantsinaid/14_kouho/meibo.html

- KAKENHI Peer Review Process
   https://www.jsps.go.jp/english/e-grants/grants03.html

- KAKENHI Review Process & Assessment Criteria
   https://www.jsps.go.jp/english/e-grants/data/2023/r5hyoutei03_en_general.pdf
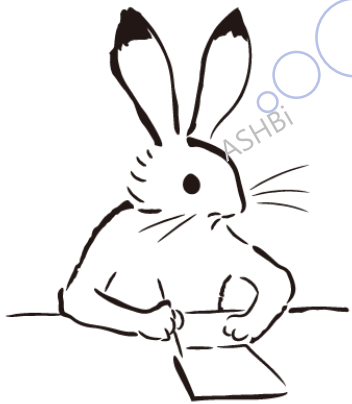
Appendix 4
Other useful tips

Questions you want to answer in your abstract

A good abstract will provide answers to reviewer's questions

- Which problem are you going to solve?

- Why is this problem important to science/society?

- What is the goal here (What will you find/achieve?)

- How will/What makes you manage to do it?

- What potential impact can your provide to science/society?

What's different in Paper Writing & Grant Writing?

Academic Writing versus Grant Writing: Contrasting Perspectives

Academic Writing	Grant Writing
Scholarly pursuit: *Individual passion*	**Sponsor goals:** *Service attitude*
Past oriented: *Work that has been done*	**Future oriented:** *Work that should be done*
Theme-centered: *Theory and thesis*	**Project-centered:** *Objectives and activities*
Expository rhetoric: *Explaining to reader*	**Persuasive rhetoric:** *"Selling" the reader*
Impersonal tone: *Objective, dispassionate*	**Personal tone:** *Conveys excitement*
Individualistic: *Primarily a solo activity*	**Team-focused:** *Feedback needed*
Few length constraints: *Verbosity rewarded*	**Strict length constraints:** *Brevity rewarded*
Specialized terminology: *"Insider jargon"*	**Accessible language:** *Easily understood*

Porter R, "Why Academics Have a Hard Time Writing Good Grant Proposals",
The Journal of Research Administration, vol 38, 2, 2007