

Research report on identifying needs and issues for promoting the introduction and spread of roundabouts in Japan

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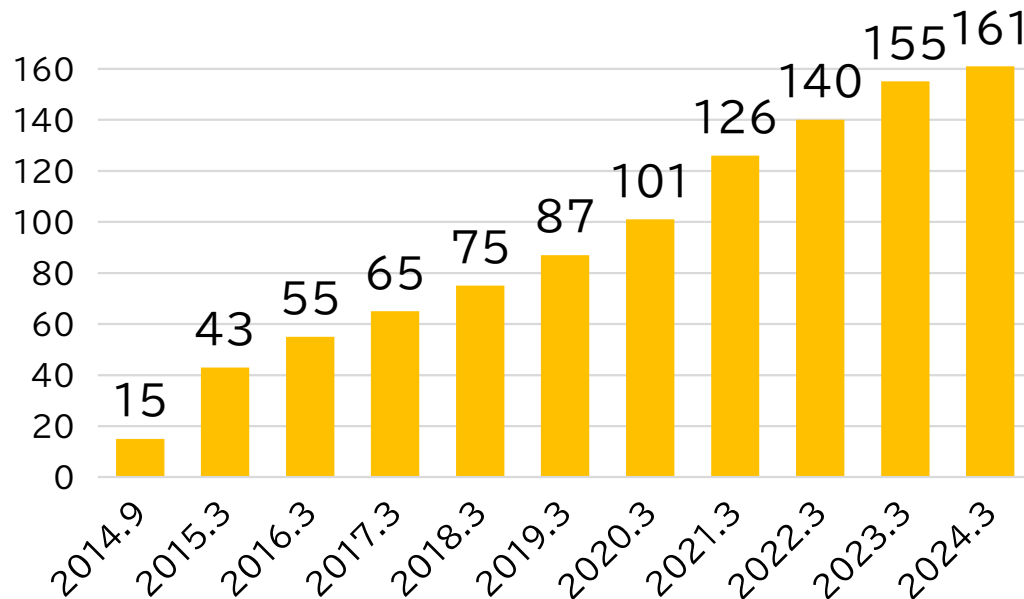
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1. Background
2. Survey's Summary
3. For the Future
4. Introduction of the best practice

1. Background

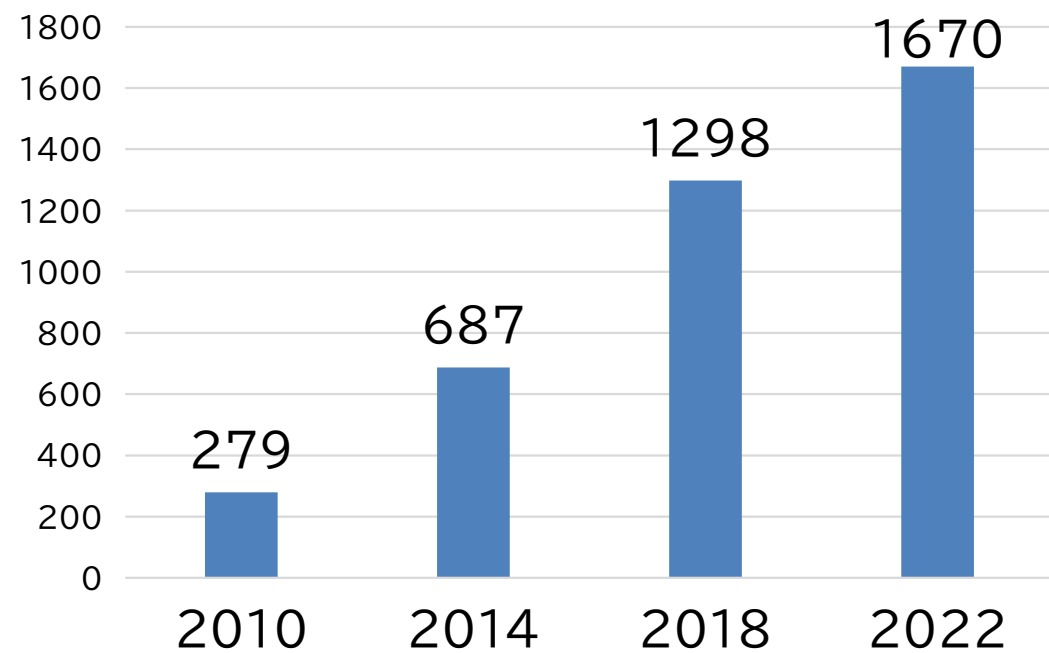
- In Japan, there are 161 roundabouts(RABS) on Mar. 2024.
- Japanese RABs can decrease 60% of traffic accident and no fatal accidents(Mar 2024).
- However, RABs can hardly prevail RABs in Japan.
 - It is necessary to find the problems of RABs in Japan.
 - We have to make the Japanese original RABs standard to prevail.

▼RAB's transition in Japan



Source: National Police Agency, JAPAN

▼RAB's transition in South Korea

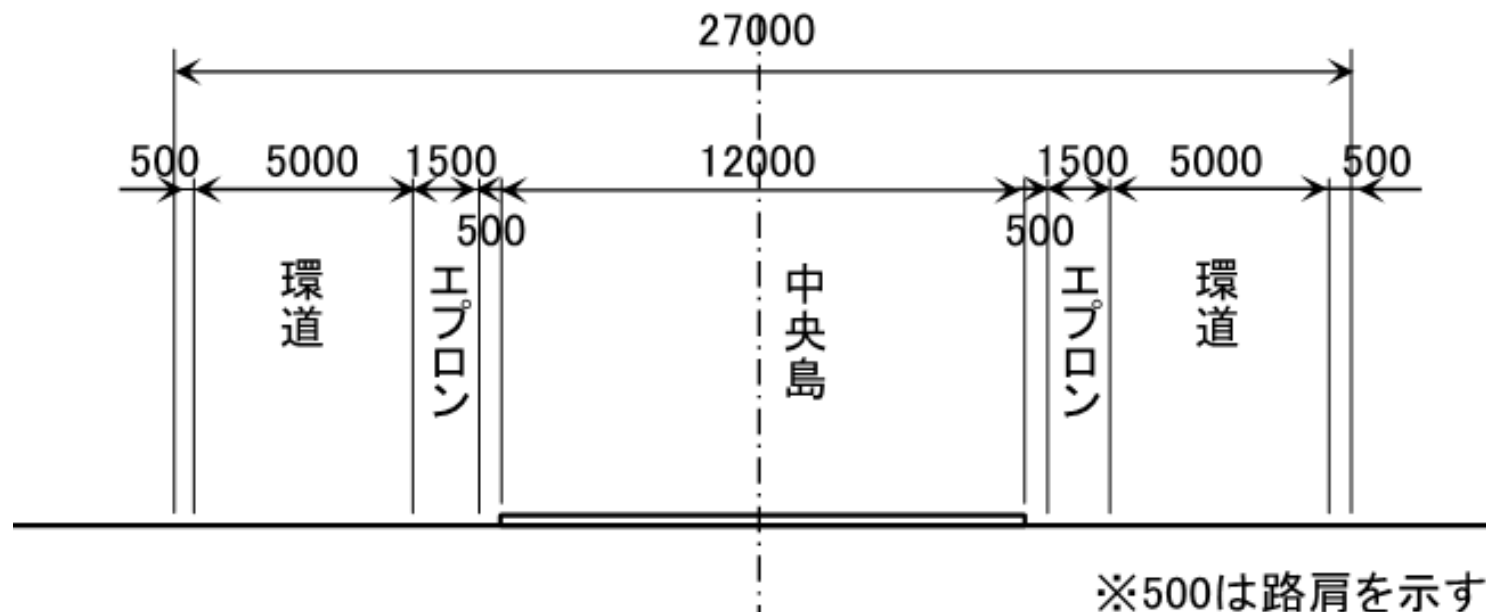


Source: Korea Transport Institute(2022)²

1. Background

- According to the Japanese RAB's notification, it's standard that there has more than 10,000 cars and more than 27m wide when designing RAB.
- Japanese normal roads is narrower than other countries.
- Some Japanese local government have given up for making RABs because candidate crossroad of RABs are not satisfied with standard.

▼ Japanese RABs width configuration notification



1. Background

- There're 2 factors we can hardly prevail RABs in Japan.
 - ① RAB's awareness is Low in Japan
 - ② Japanese RAB's notification(as a standard for secure the wide more than 27m)
- For elucidate the problem of RABs in Japan, we have done the survey for all of the Japanese road managers.

▼ Survey letter(Excel)

組織の種類	調査日	調査項目
1. 国土交通省		1. RABの導入状況
2. 国土交通省		2. RABの導入状況
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We set questions by categorizing them according to the type of organization

[A] Organizations that implement RABs on their roads

[B] Organizations that has experience of design RABs(but decided not to implement)

[C] Organizations that doesn't have the experience of design RABs

2. Survey's Summary

▼ Questions

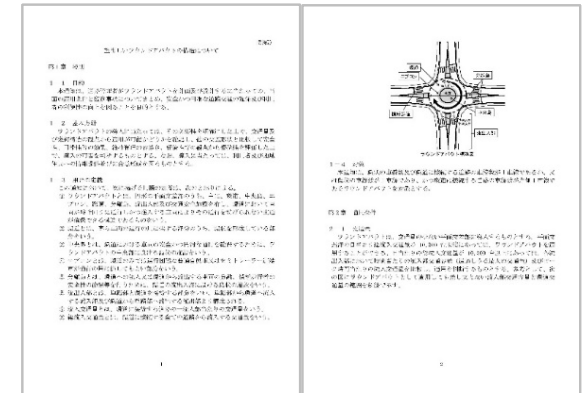
【A】	【B】※	【C】
●Do you know RAB?		
●Have you ever read the document①?		
●Have you ever read the document②?		
●Have you ever been to through RABs?		
●Which RABs' effect do you expect?		
●Do you think which points are necessary for prevail RABs in Japan?		

※Only the organization【B】, they also answered the below questions.

- Why did you decide not to design RABs?
- Tell me the decision timing that not to design RABs

▼Document①

RABs' notification (Made by MLIT, Japan)



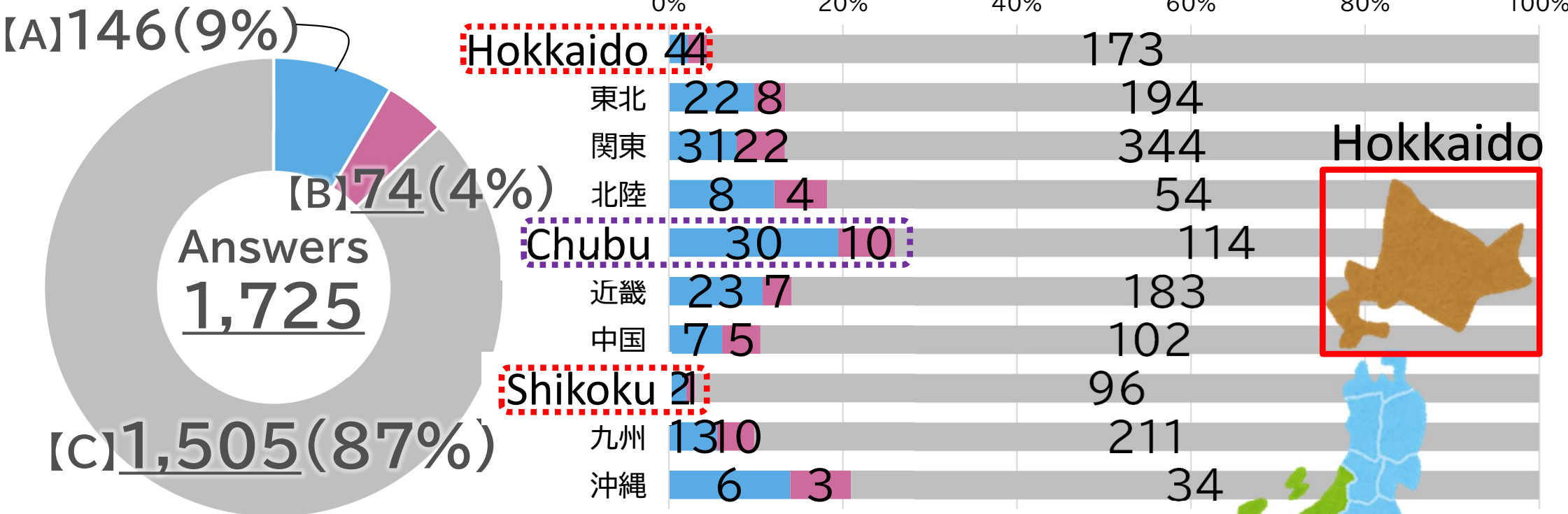
▼Document②

RABs' pamphlet (Made by MLIT, Japan)



2. Survey's Summary

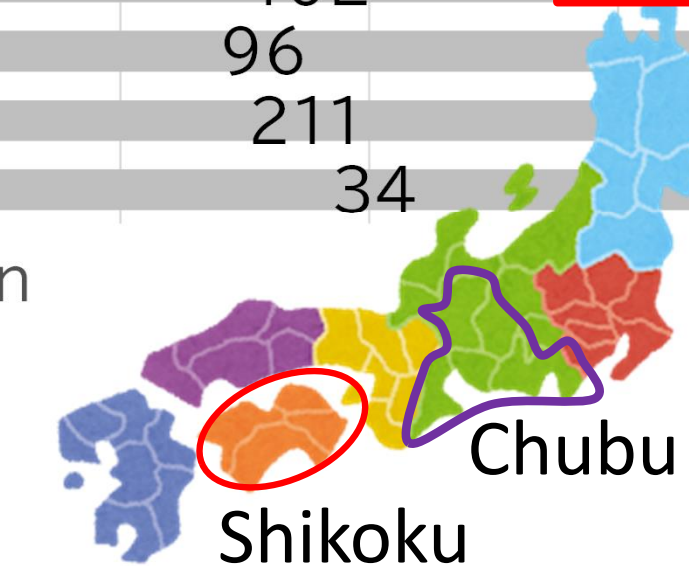
▼ Attribute information



[A] Organizations that implement RABs on their roads

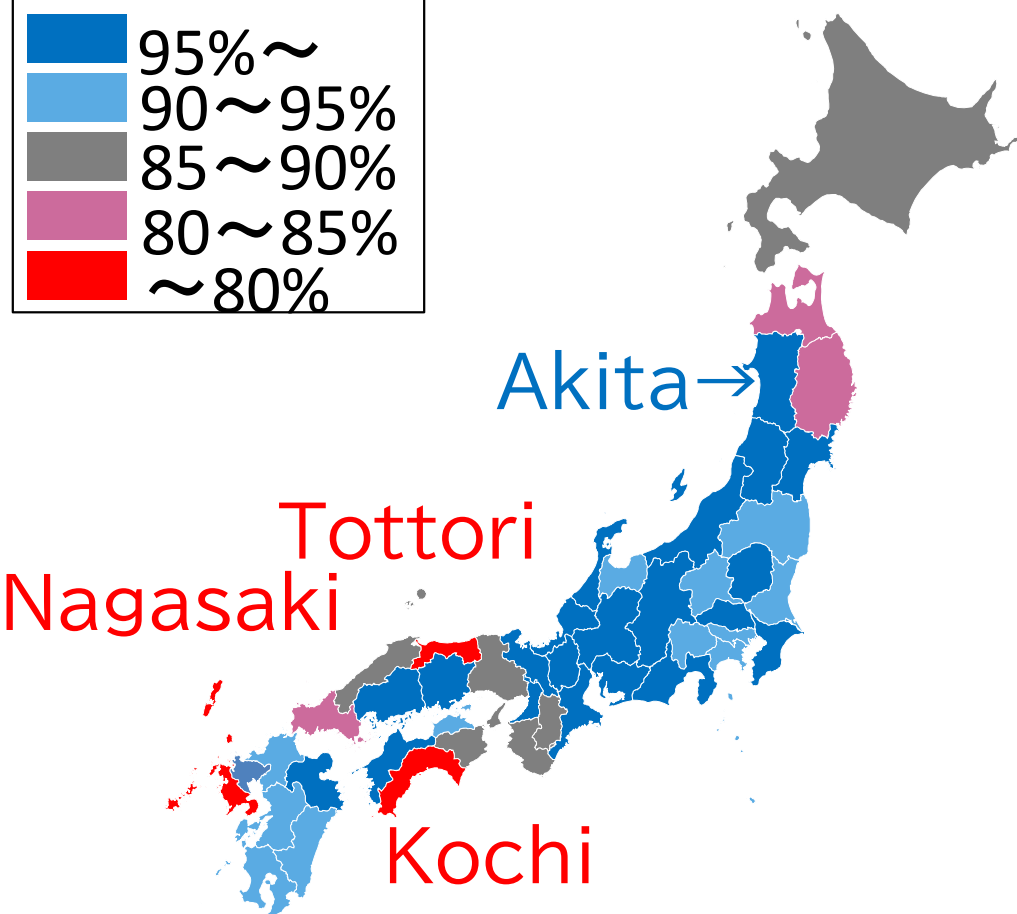
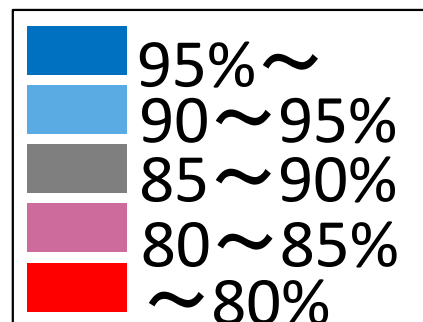
[B] Organizations that has experience of design RABs (but decided not to implement)

[C] Organizations that doesn't have the experience of design RABs



2. Survey's Summary

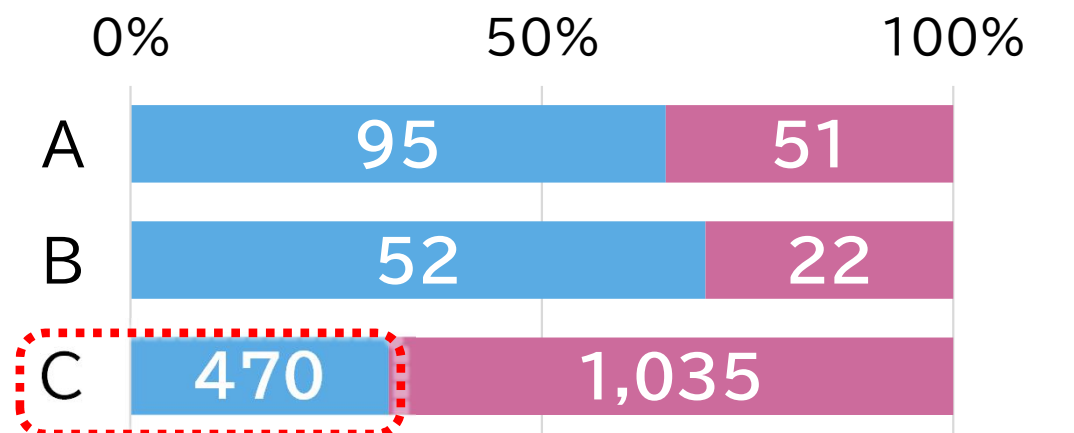
▼Awareness of RAB



The percentage tends to the number of RABs.

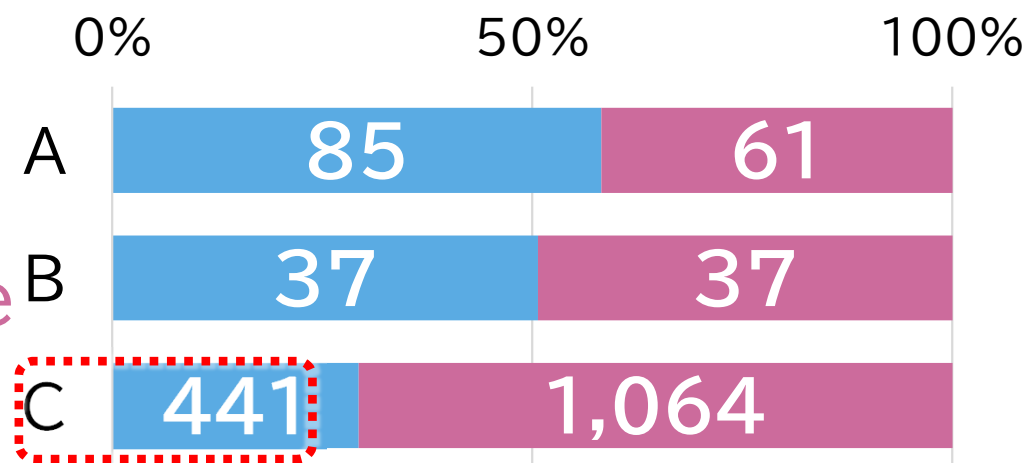
(Akita Pref. is high percentage however they have no RABs.)

▼Awareness of RAB's notification



Blue: Have known Red: Haven't yet

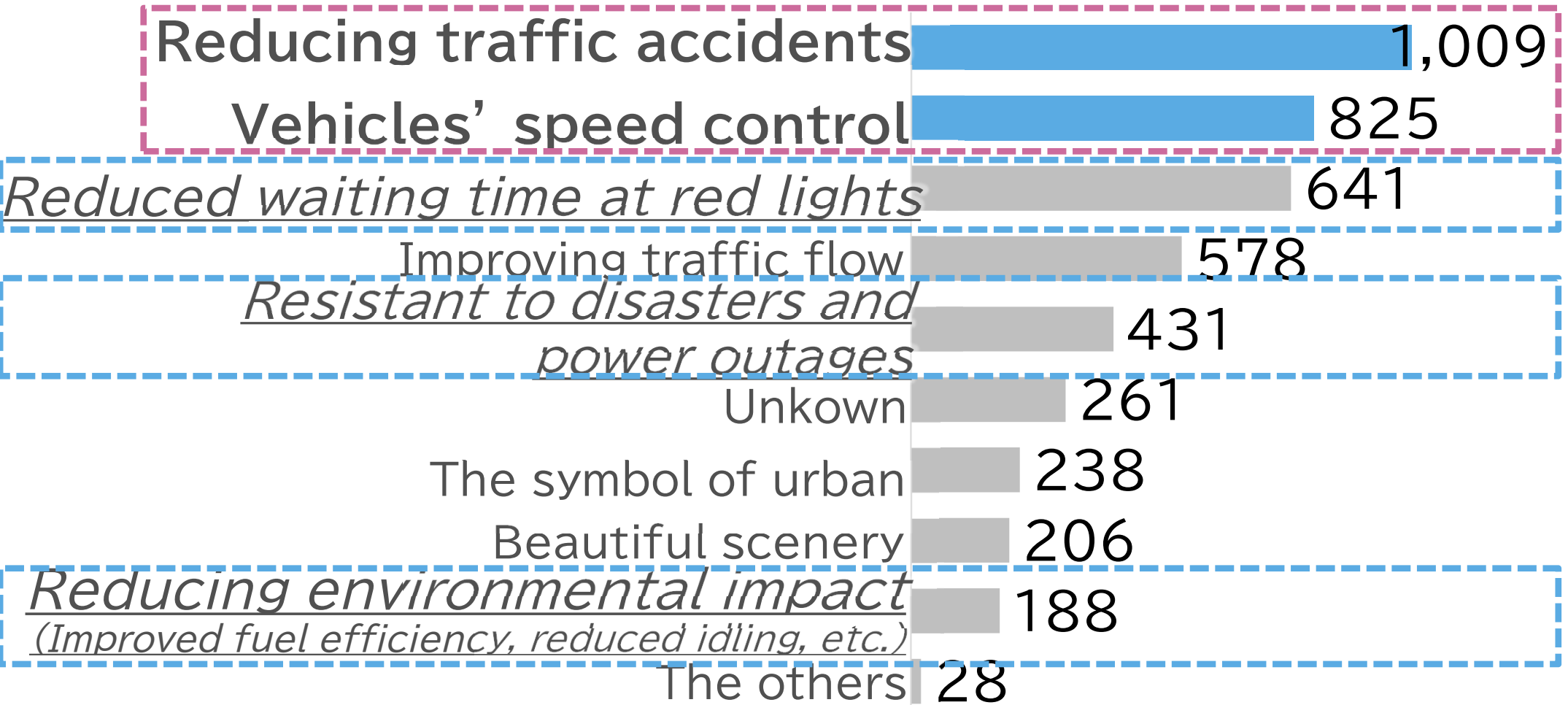
▼Awareness of RAB's pamphlet



2. Survey's Summary

▼The expect as RABs' effects

Many organizations chose.

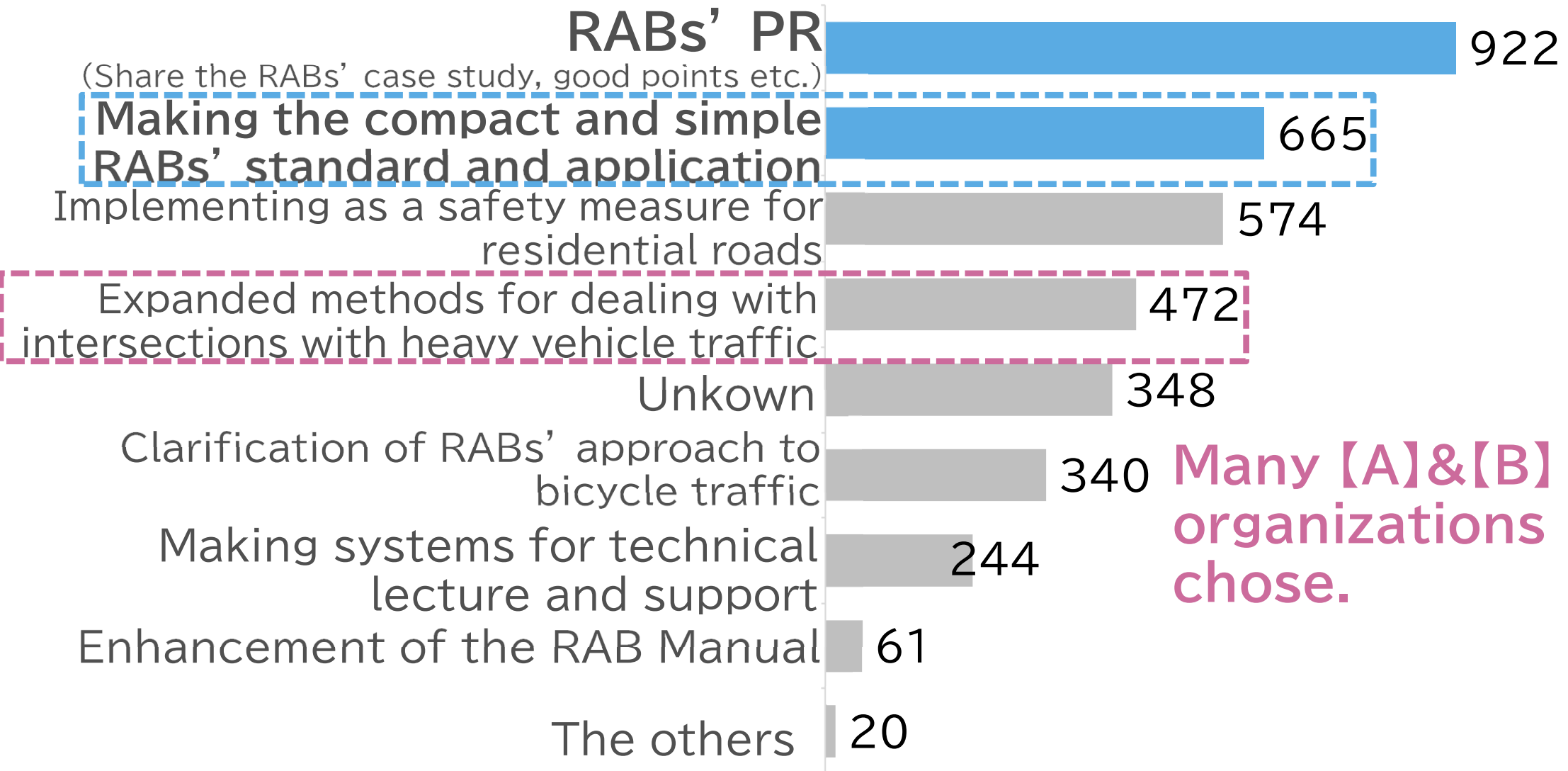


When held RABs seminar after this survey, many audiences have recognized.

2. Survey's Summary

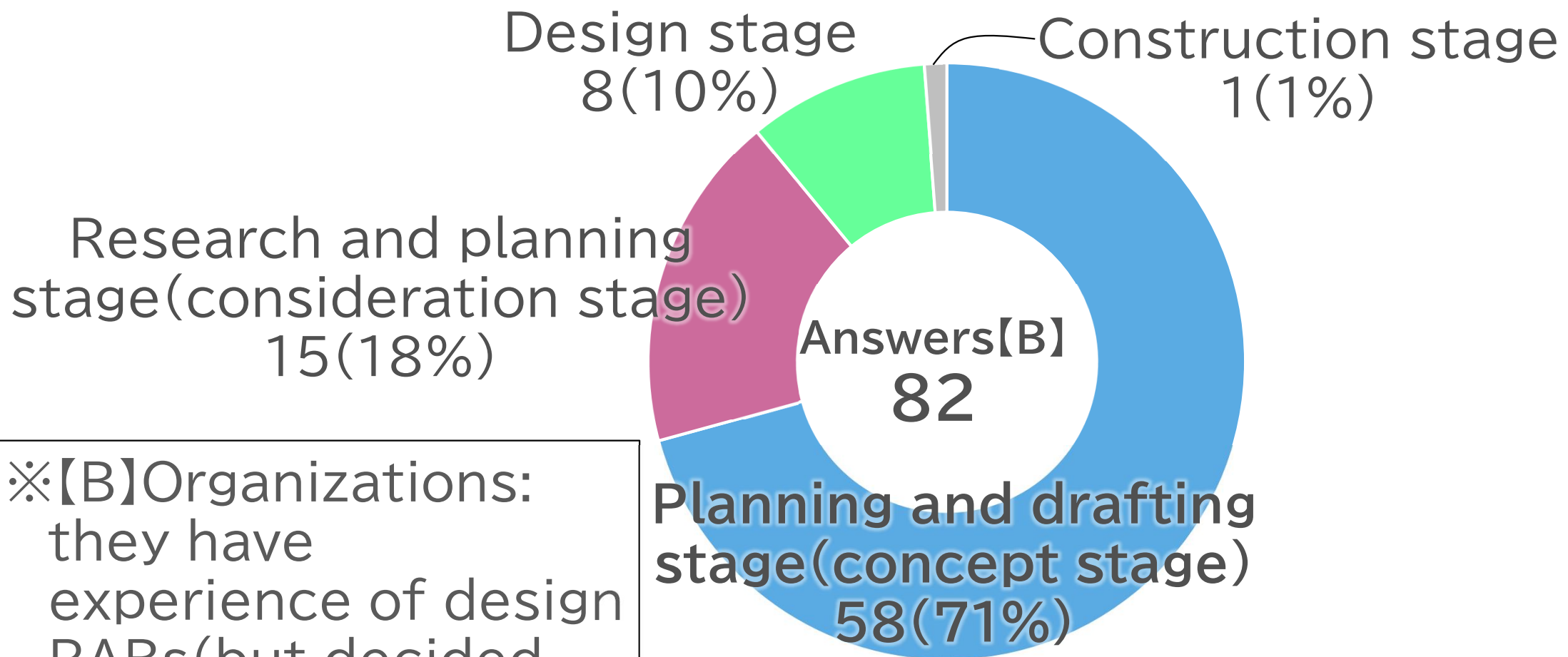
▼ Necessary points for prevail RABs

Many [C] organizations chose.



2. Survey's Summary(Focus on 【B】 Organizations)

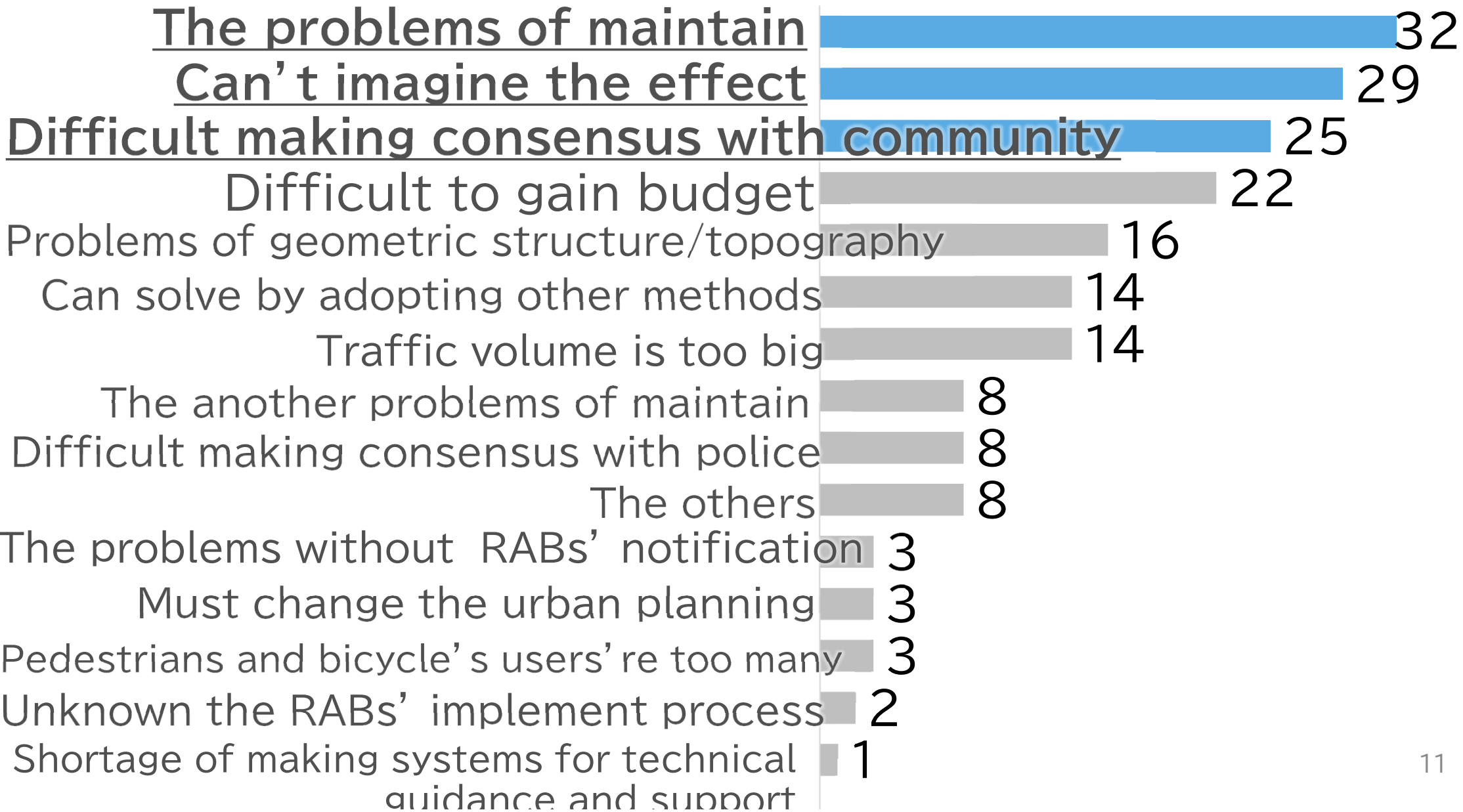
- One of the reason why they decided not to implement is“they can't imagine the effect of implementing RABs”.



※【B】Organizations:
they have
experience of design
RABs (but decided
not to implement)

2. Survey's Summary(Focus on 【B】 Organizations)

▼The reason why they decided not to implement RABs



3. For the Future

To promote RABs in Japan, we summarized the issues that need to be addressed in five points The issues.

Issues	Initiative plan (short term)	Initiative plan (long term)
•PR •Human resource development	•Planning RAB's seminar(constant) •Finding the problems of RAB's (implement and operation)	•Making PR method[Target: citizens] (Streaming, SNS, etc.) •Making document focus on each process(Planning～Operation)
Considering process	Summary of the introduction process	•Make the guideline which shows the method of choosing Intersection Control Method •Proposals for reflection in prefectural design guidelines, police consultation materials, etc.

3. For the Future

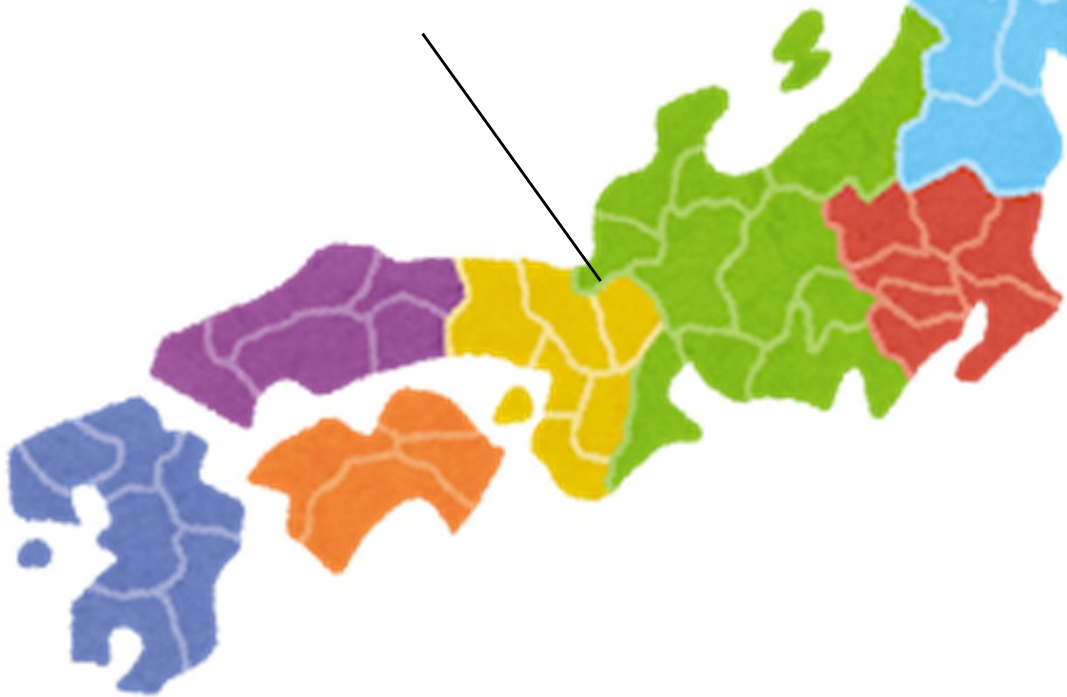
Issues	Initiative plan (short term)	Initiative plan (long term)
Cost	PR the case studies and research results of compact RABs	Make the case studies book(the case studies which used subsidy)
Safety technology	Invent how to extract suitable locations for implement RABs	Preparing consultation counters we can easily get help
For snowy cold regions	•Make FAQ which collected the solutions which solved the snowy cold regions' original problems •PR FAQ(Using web site etc.)	•Make the design guideline(Suitable for snowy and cold regions) •Planning RAB's seminar(Specialized for the For snowy cold regions' local governments)

4. Introduction of the best practice

Pref. police has led making RABs
(Shiga pref.)



Making RAB as the symbol of the urban
and earthquake recovery
(Miyako, Iwate pref.)





- This survey has been done as the project of IATSS (International Association of Traffic and Safety Sciences: Japan) to promote RABs in Japan.
- For this survey, MLIT (Road Bureau, Japanese government) and many local governments have cooperated with us.