



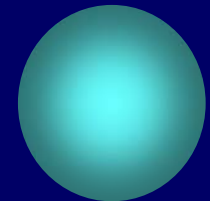
AIM-TWS 31 Oct 2008 @NIES

Japan Scenario for LCS

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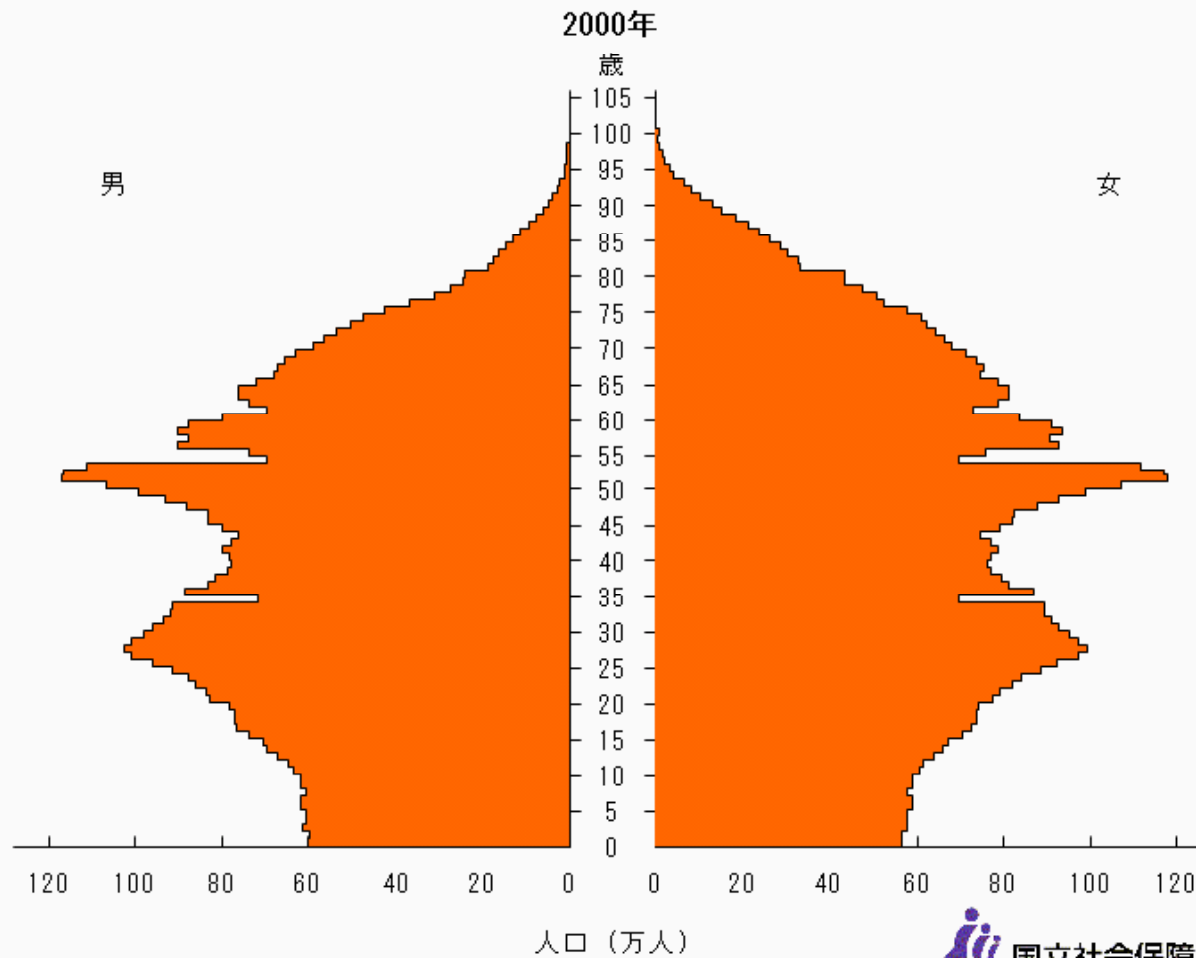
Contents

- 1. Background**
- 2. Scenario development**
- 3. Results of ESS**
- 4. Policy implementation**
 - Low carbon working style (teleworking)
 - Green and door to door transportation
 - Smart life by house sharing
- 5. Conclusion**

Background

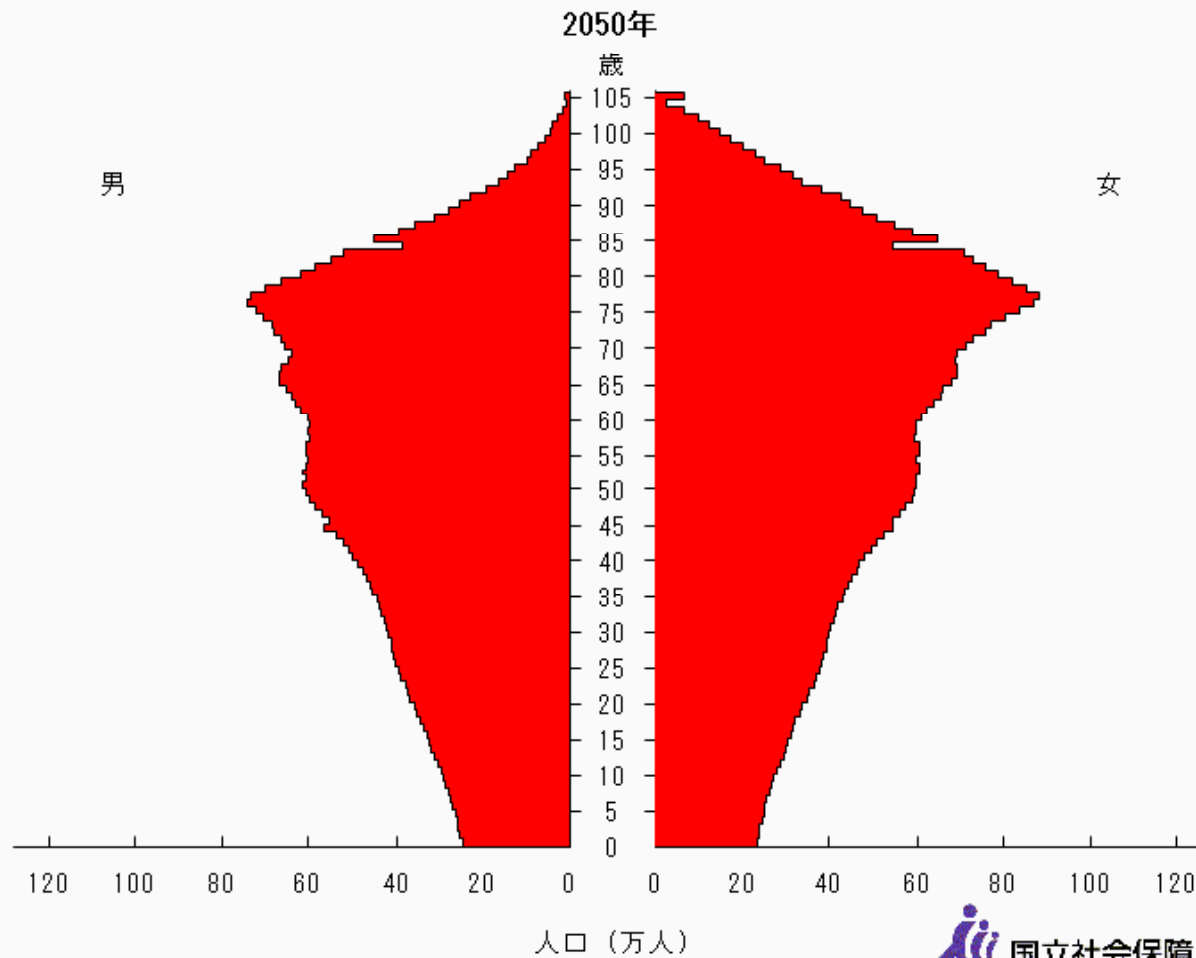
- ❖ **Now, Japan is already aging society.
In 2050, Japan is completely aged society.**
- ❖ **Aged society has several problems.**
 - Lack of labor force
 - Elderly people need door to door transportation.
 - Elderly people tend to live alone. No. of single-person household will increase.
- ❖ **Consider environmental-balanced aged society in order to create LCS**
- ❖ **Aim to create harmonious LCS with aged society**

Population Pyramid by Age & Sex in 2000



Source: <http://www.ipss.go.jp/>

Population Pyramid by Age & Sex in 2050



Source: <http://www.ipss.go.jp/>

Background

- ❖ **Now, Japan is already aging society.
In 2050, Japan is completely aged society.**
- ❖ **Aged society has several problems.**
 - Lack of labor force
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Scenario

- ❖ **Our scenario is based on Japan B scenario.**
- ❖ **In addition, we identify three countermeasures which are also beneficial for aged society.**
 - Low carbon working style (teleworking)
 - Green and door to door passenger transportation
 - Smart living by house sharing
- ❖ **We also assume to implement nuclear power generation compare to Japan B scenario.**

Scenario quantification

❖ **Low carbon working style (teleworking)**

30% decrease of passenger transportation service demand

❖ **Green and door to door passenger transportation**

20% private vehicles' service demand converts to public transportation

❖ **Smart living by house sharing**

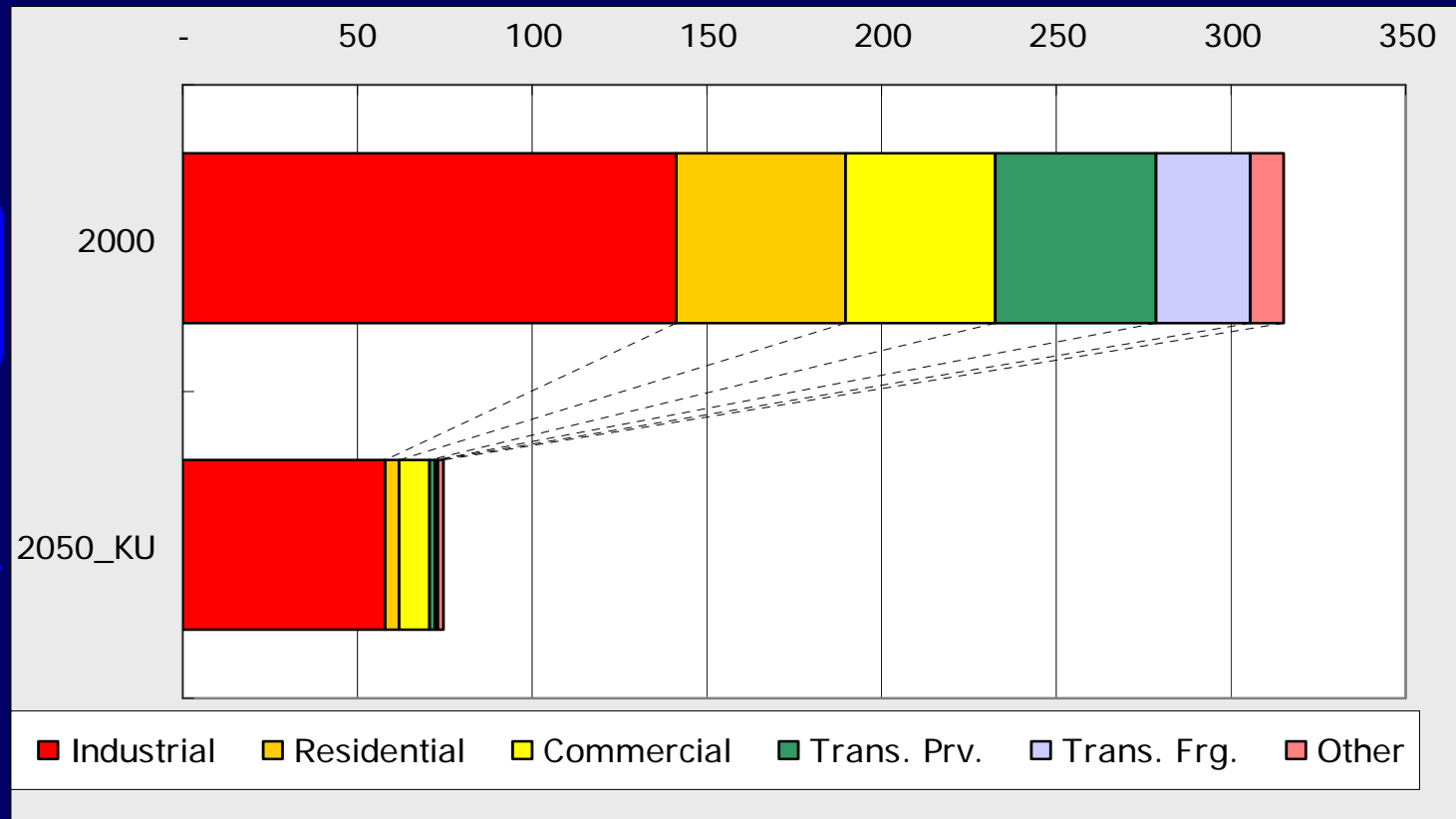
25% decrease of service demand in residential sector

❖ **Nuclear power generation**

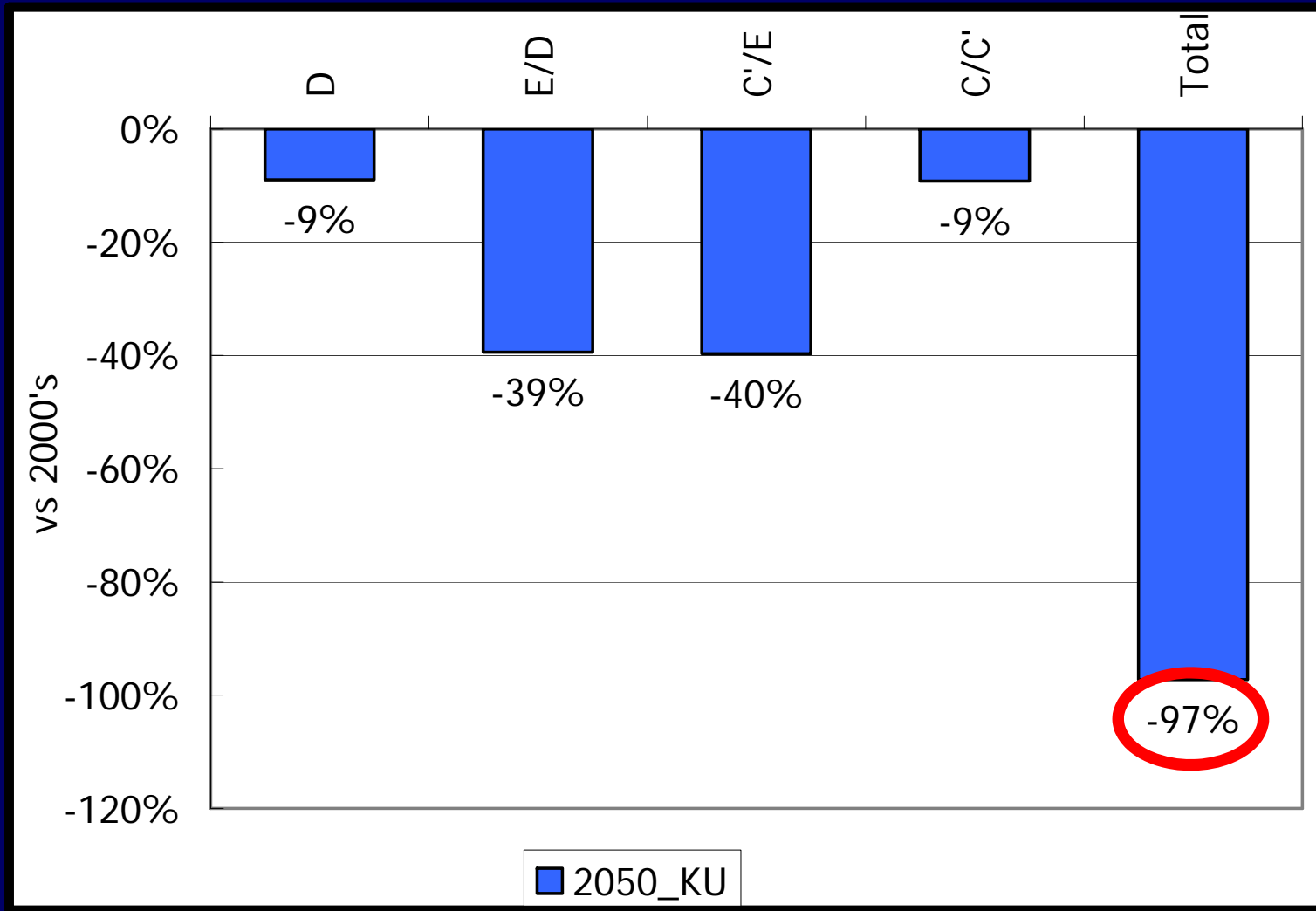
15% increase of Share of nuclear power generation

[Results 1] CO₂ emission by sector

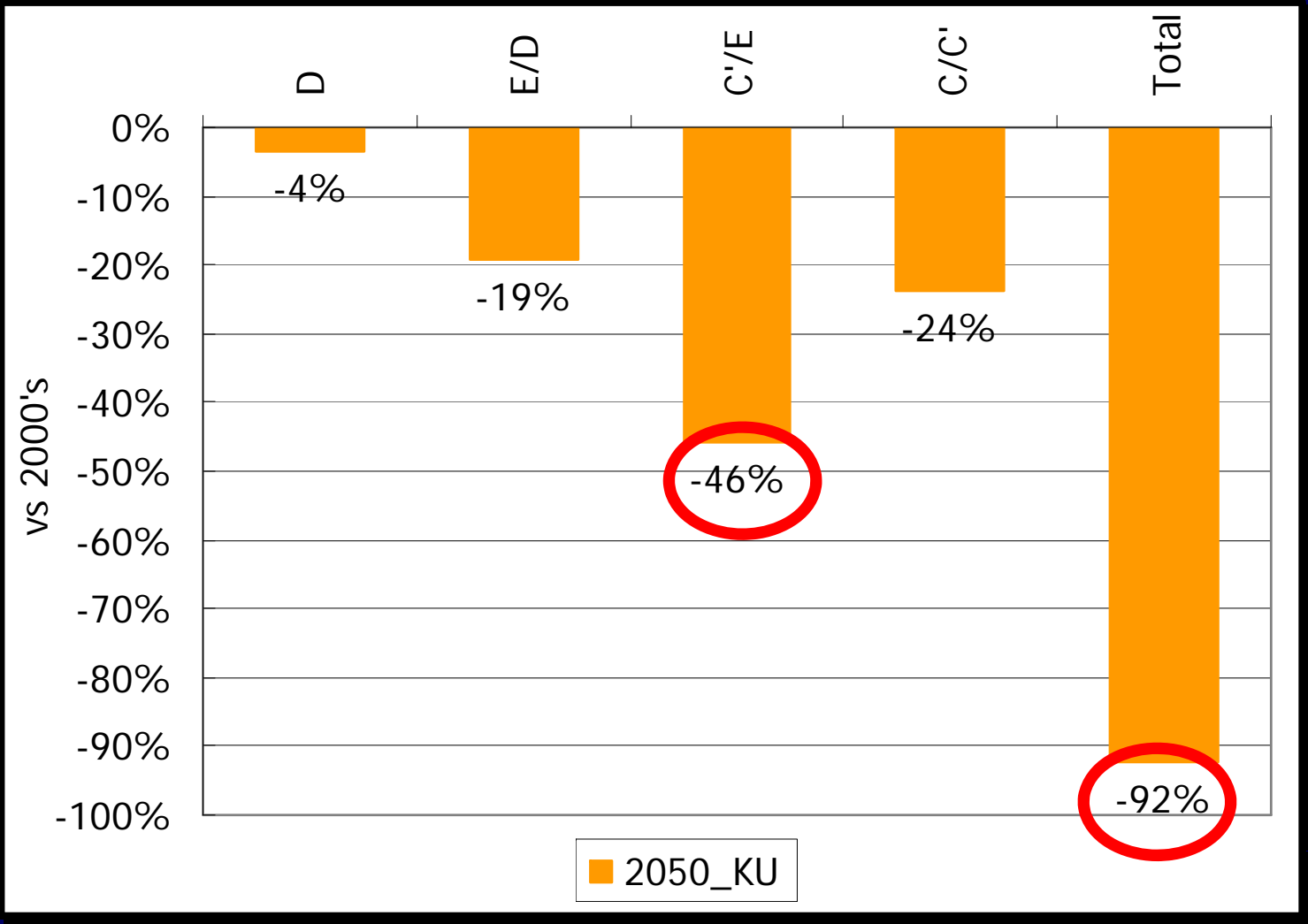
76%
reduction



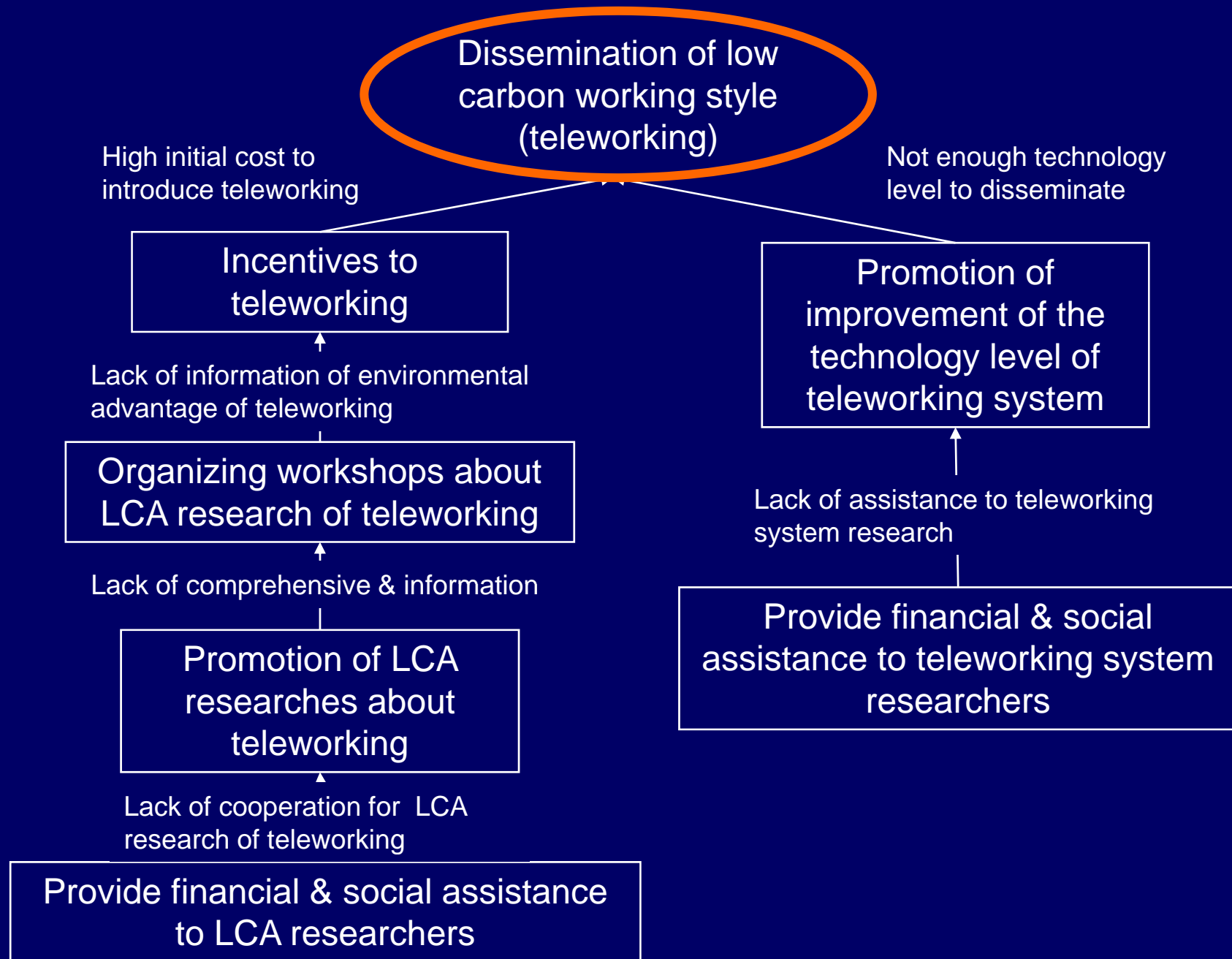
[Results 2-a] Factor analysis (Passenger transportation)



[Results 2-b] Factor analysis (Residential)



Low carbon working style (teleworking)



Low carbon working style (teleworking)

Barriers


Future objectives

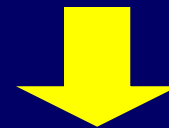
Lack of cooperation for research

 5yr
Provide financial & social assistance to LCA researchers

Low carbon working style (teleworking)


Lack of comprehensive and correct information

 5yr
Promotion of LCA researches about teleworking



Reduce 30 % passenger transport demand


Lack of information of environmental advantage of ICT working style


 2yr
Organizing workshops about LCA research of teleworking

High initial cost

 10yr
Incentives to teleworking

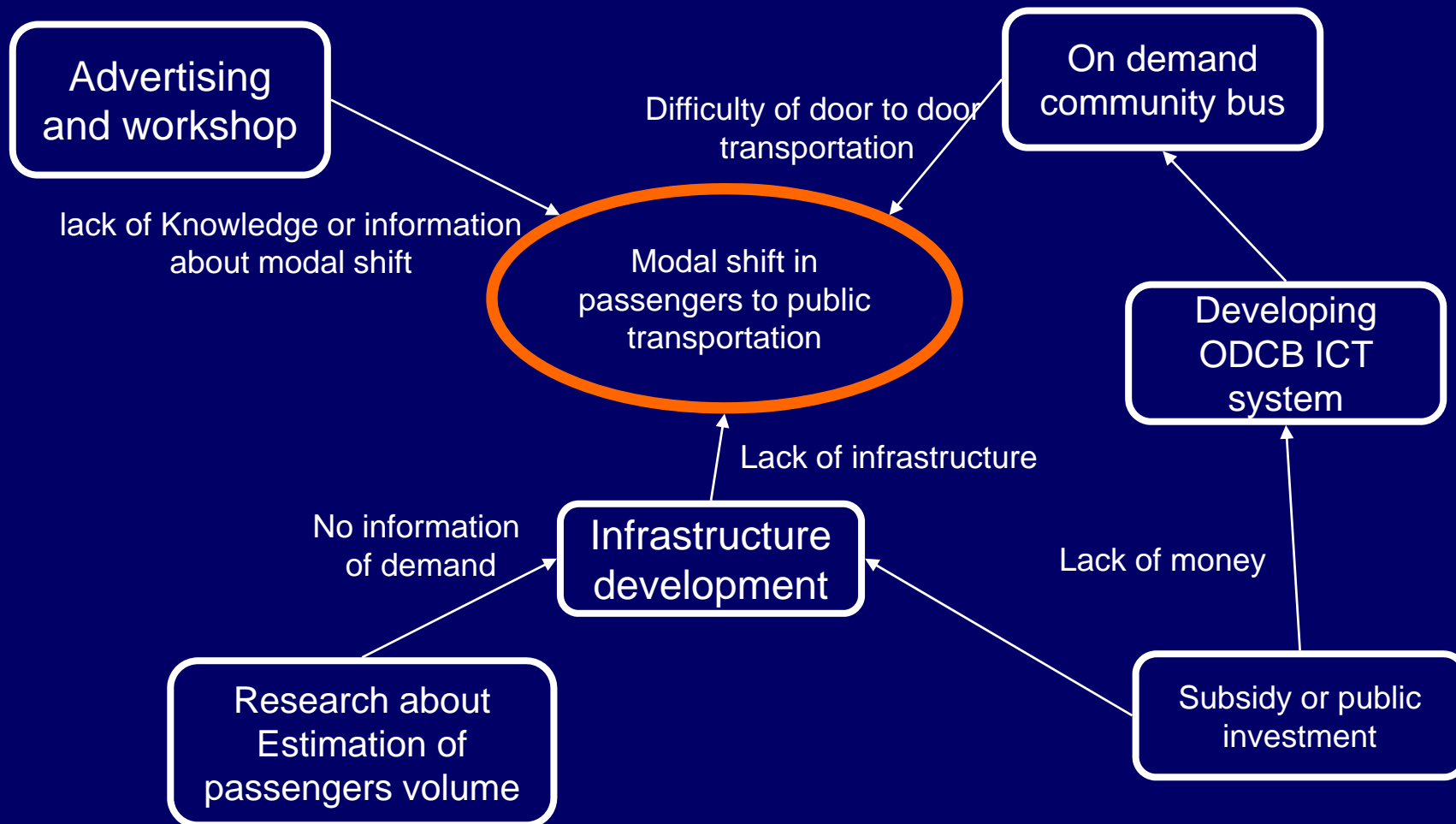
Not enough technology level to disseminate

 20yr
Promotion of improvement of the technology level of teleworking

 10yr
Dissemination of low carbon working style (teleworking)



Action (green and door to door passenger transportation)



Gantt chart (green and door to door passenger transportation)

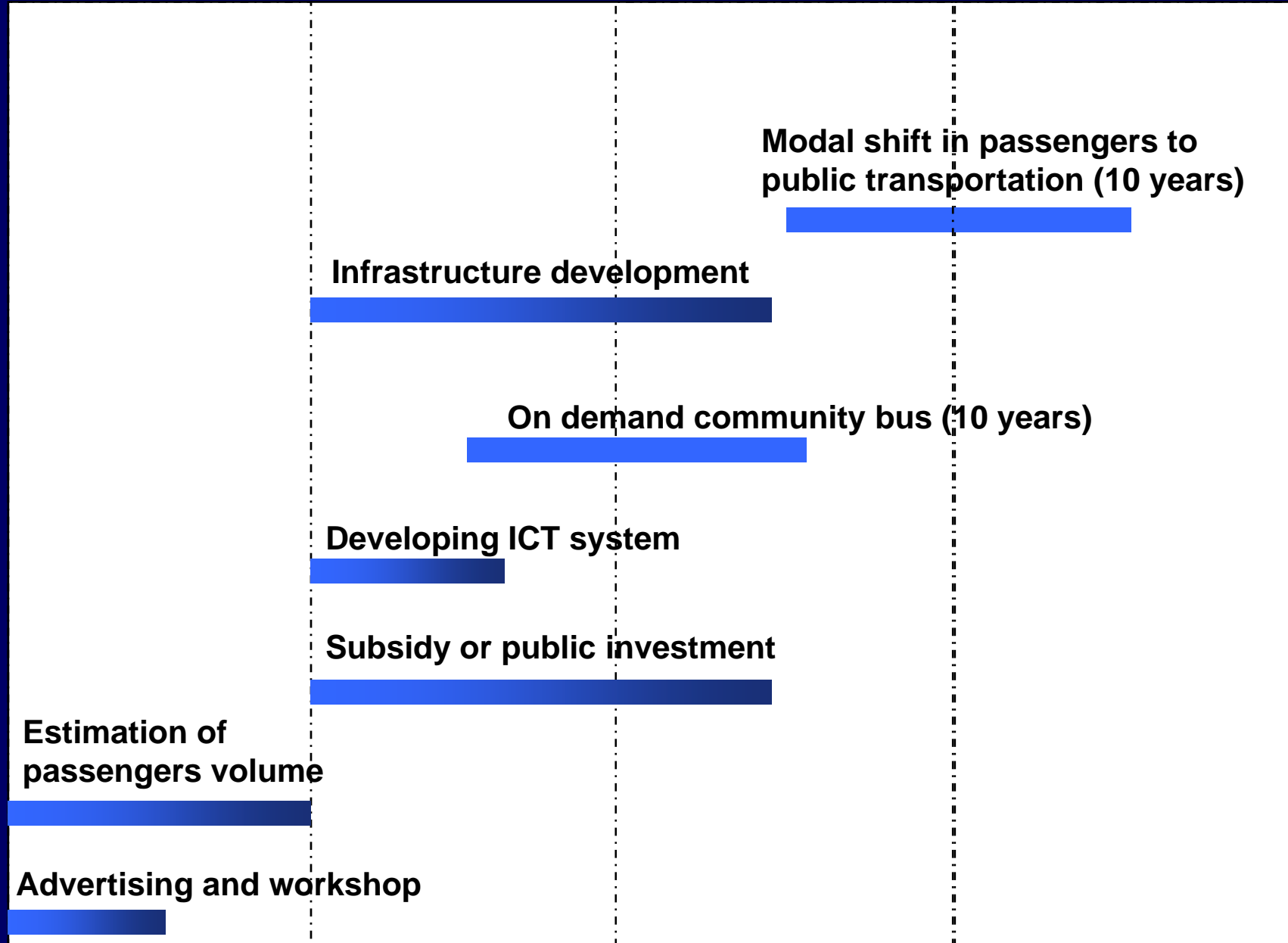
2008

2020

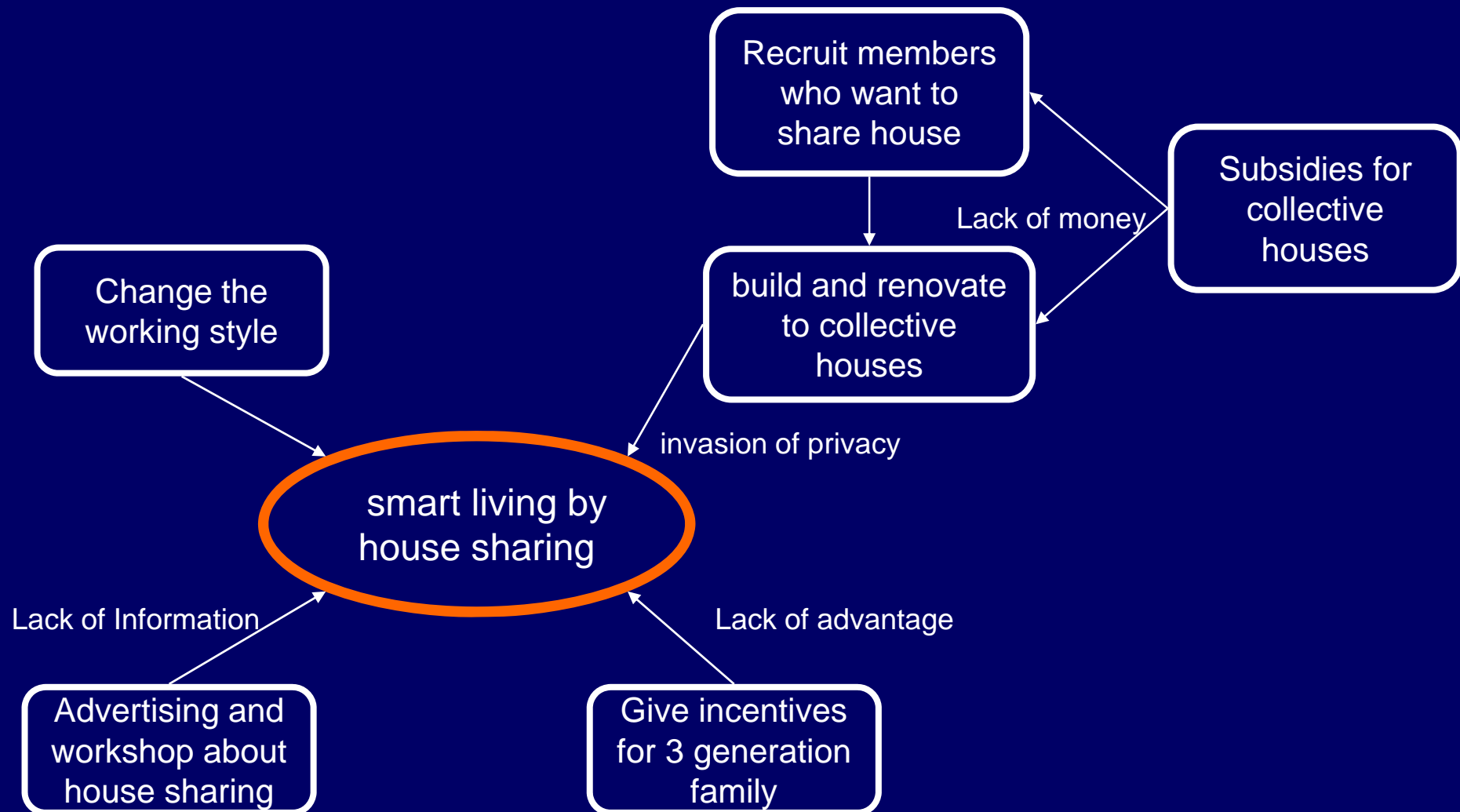
2030

2040

2050



Action (smart living by house sharing)



Gantt chart (smart living by house sharing)

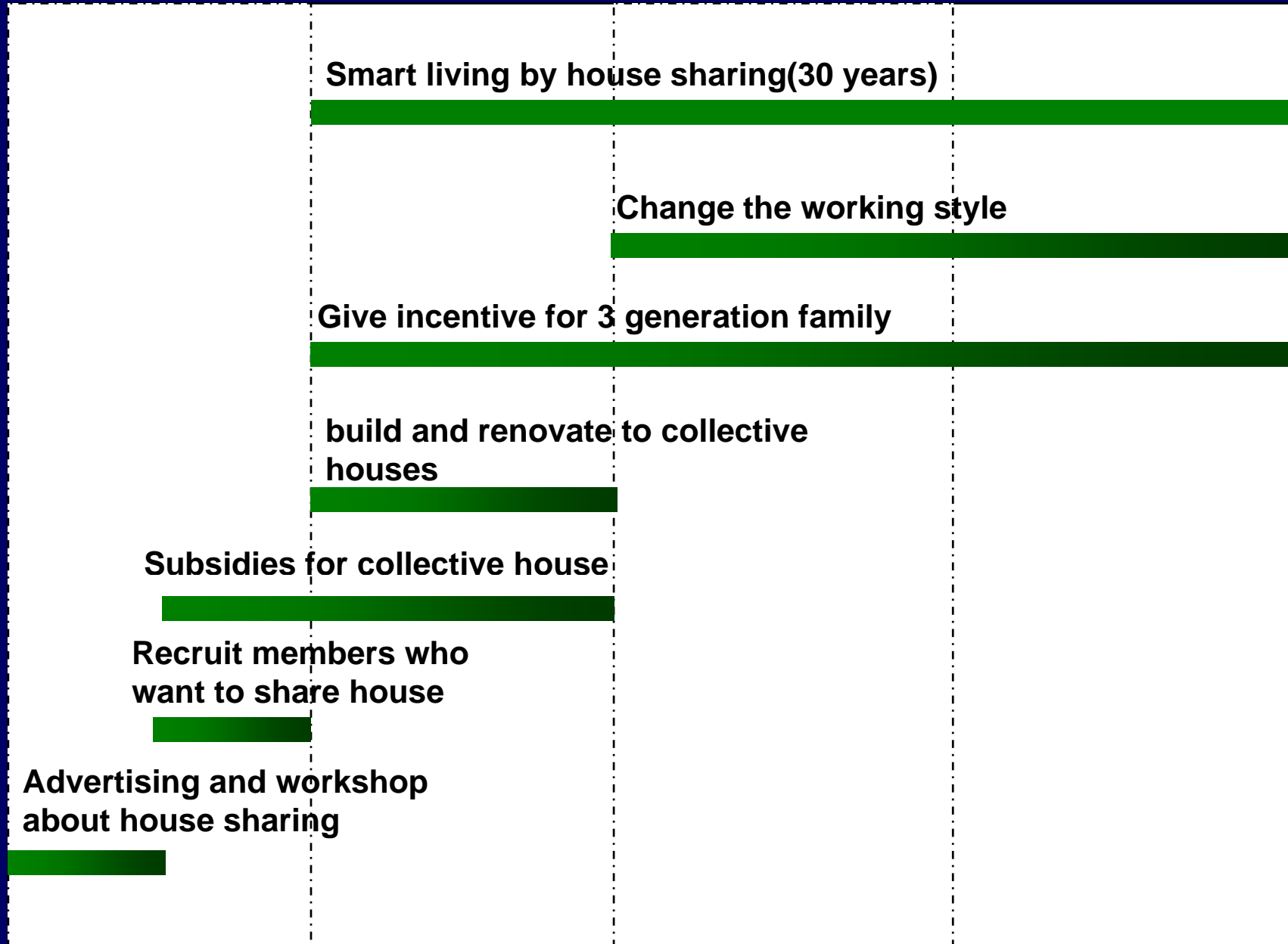
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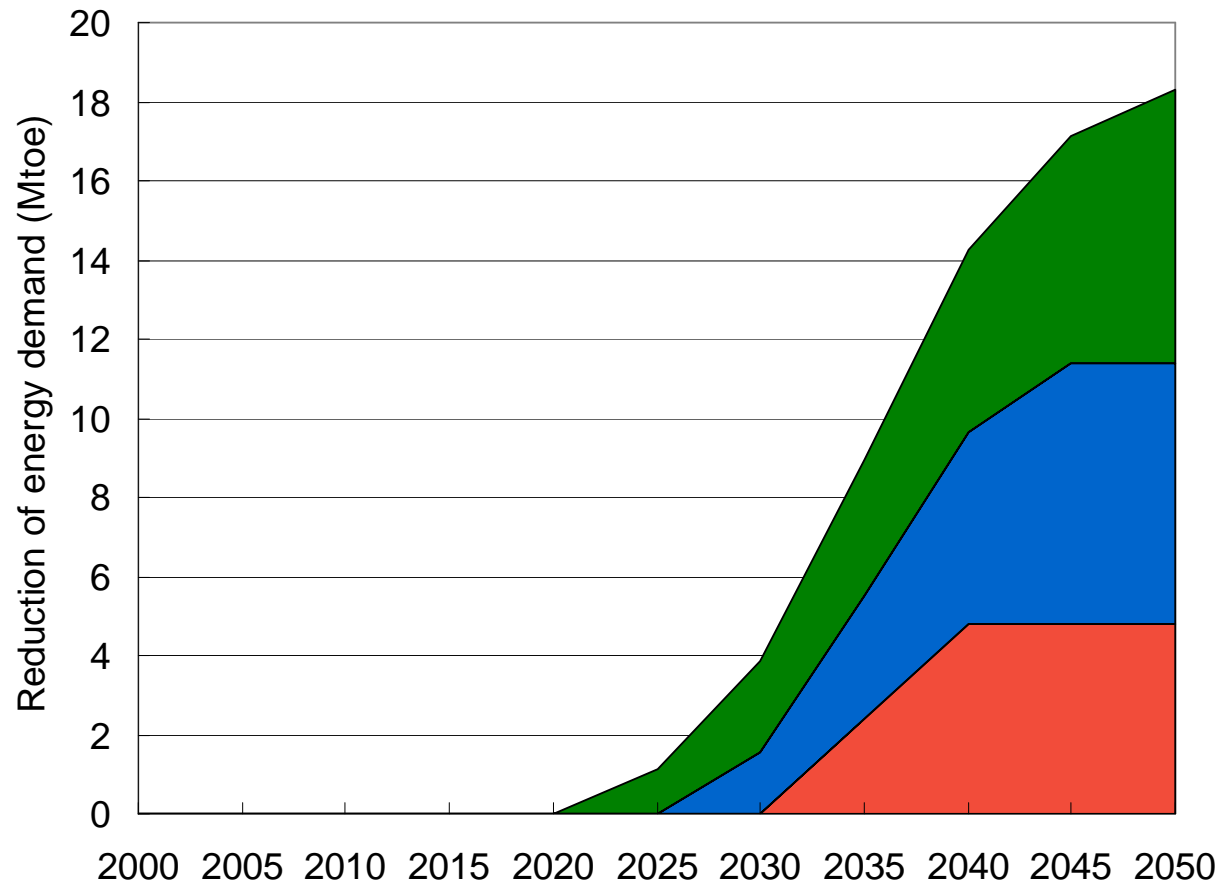
2030

2040

2050



Reduction of energy demand



- Green and door to door passenger transportation
- Low carbon working style (teleworking)
- Smart living by house sharing

conclusions

- ❖ We developed the LCS scenario which is also beneficial for aged society.
- ❖ The scenario shows 76% emission reduction vision.
- ❖ We proposed three actions by using back casting.

Our opinions about BCM

❖ Options

- Too many options

If we assume modal shift, we have to make options of each service decrease and increase.

❖ Assumption

- Energy based set up

If we assume modal shift, we want to set up by conversion change rate not by energy demand change.

Thank you!!