Comprehensive MM measures and cost-benefit performance in urban areas

-- with a focus on the Fukuyama metropolitan area in Japan --

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Fukuyama Metropolitan Area Location

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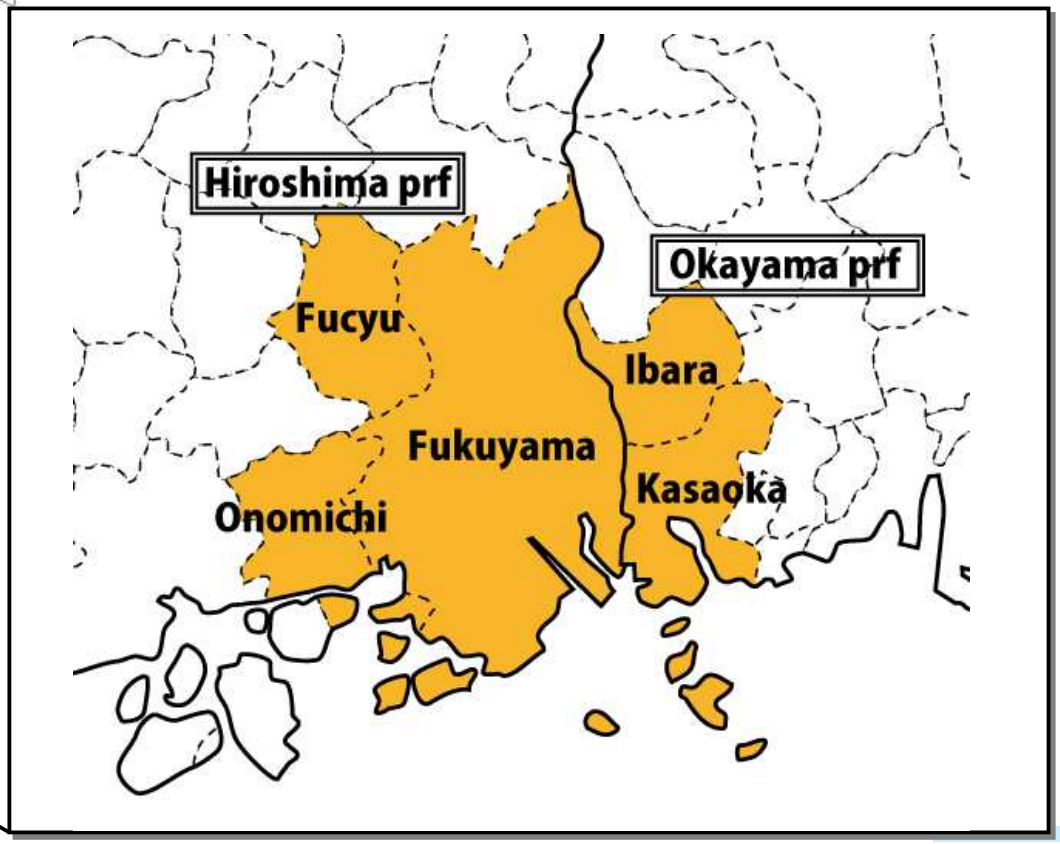
Fukuyama Metropolitan Area
(Called the local “Bingo”)



Traffic Problems of the Fukuyama Metropolitan Area

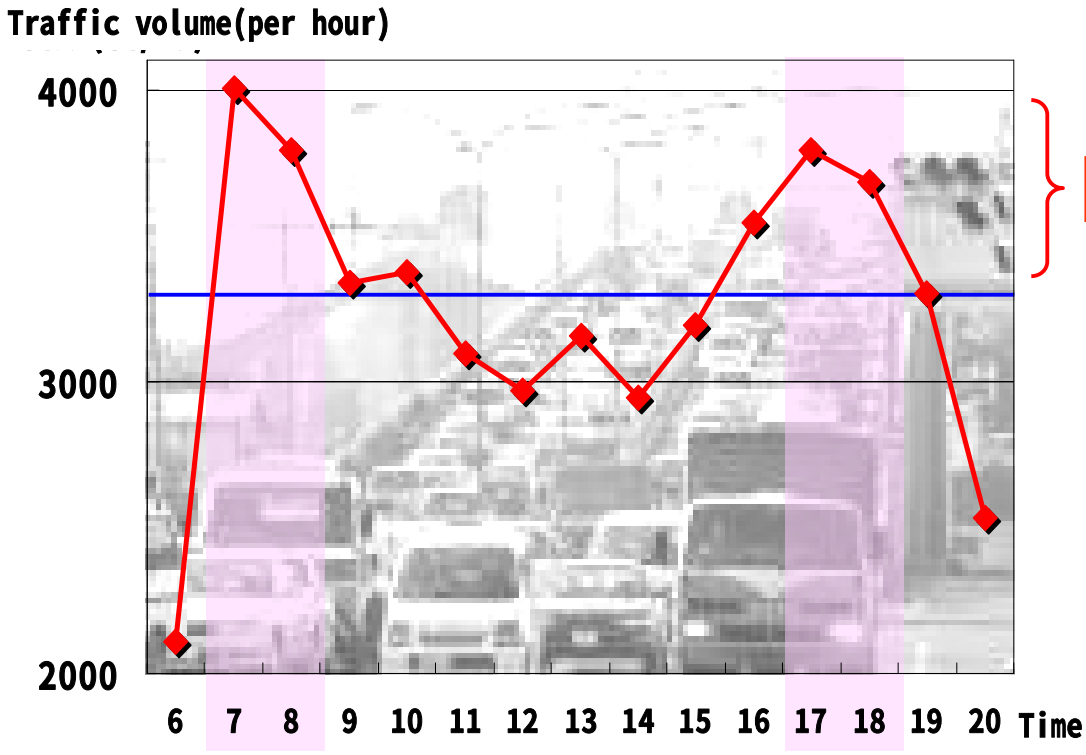
Traffic Problems of the Fukuyama Metropolitan Area

(1) Area residents depend heavily on cars:
Traffic has increased by half over the past 15 years.

(2) Public transport systems are insufficient:
Users have decreased by 60% over the past 15 years.

(3) Traffic entering the urban center increases intensively during morning and evening peak hours.

Traffic Problems of the Fukuyama Metropolitan Area



automobile commuting increases intensively at morning and evening peak times

traffic jams

environmental deterioration (global warming)

▲automobile traffic volume by time period

To solve Fukuyama metropolitan area traffic problems

Formulation of a “Comprehensive plan for smoother transportation”

Reduce traffic jams

Prevent global warming

Establishment of a comprehensive plan promotion committee for smoother Fukuyama metro area transportation

with a head office:
Ministry of Land， Hiroshima Prefecture， Fukuyama City

Formulation of “comprehensive plans for smoother transportation” in 2002
(annual plans: 2003–2007)

Overview of “comprehensive plans for smoother transportation”

Comprehensive plans for smoother transportation

- **Hard measures**
- Soft measures

TDM measures	**Main measures**	**⇒ BEST Campaign** **To put the *No My Car Campaign* into effect year-round**
Multimodal measures	Settlement support measures	Staggered commuting
		Rental cycles at the city center
		Loop bus
		Communication service
		P&R, P&BR, and cycle & ride
Education activities		TFP
		Forums, etc.

“BEST Campaign” as the main measure

※“BEST Campaign”
＝Bingo Environmentally Sustainable Transport

What is the “BEST Campaign”?

January, 2006 — **Membership no-my-car campaign, “BEST Campaign” started.**

Personal burdens were reduced.

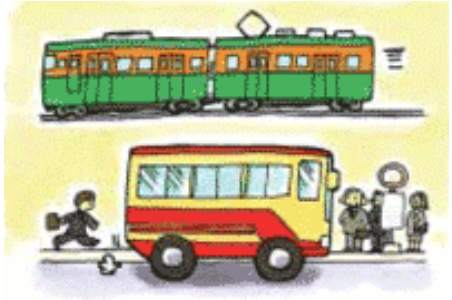
Participation days left to members’ discretion

Members participate in the campaign more than once a month

Participation ways left to members’ discretion

bicycling

public transportation



car pool

staggered commuting to avoid congestion hours

Characteristics of the “BEST Campaign” (1/3)

Characteristic 1: Using PC and cell-phone communication facilities, monthly communication is realized.

E-mail asking members to participate in the month’s activities and reporting them (early in the month)

E-mail to answer the committee to say whether they participate in it or not (by the tenth day of every month)

- presence of participation
- participation day(date and time zone)
- participation way (direction or method)

◆Characteristics of “BEST Campaign” (2/3)

Characteristic 2: Individual reports are aggregated to give members feedback as an effect on the whole urban area.

Effects on the whole urban area are fed back to members (monthly)

Committee

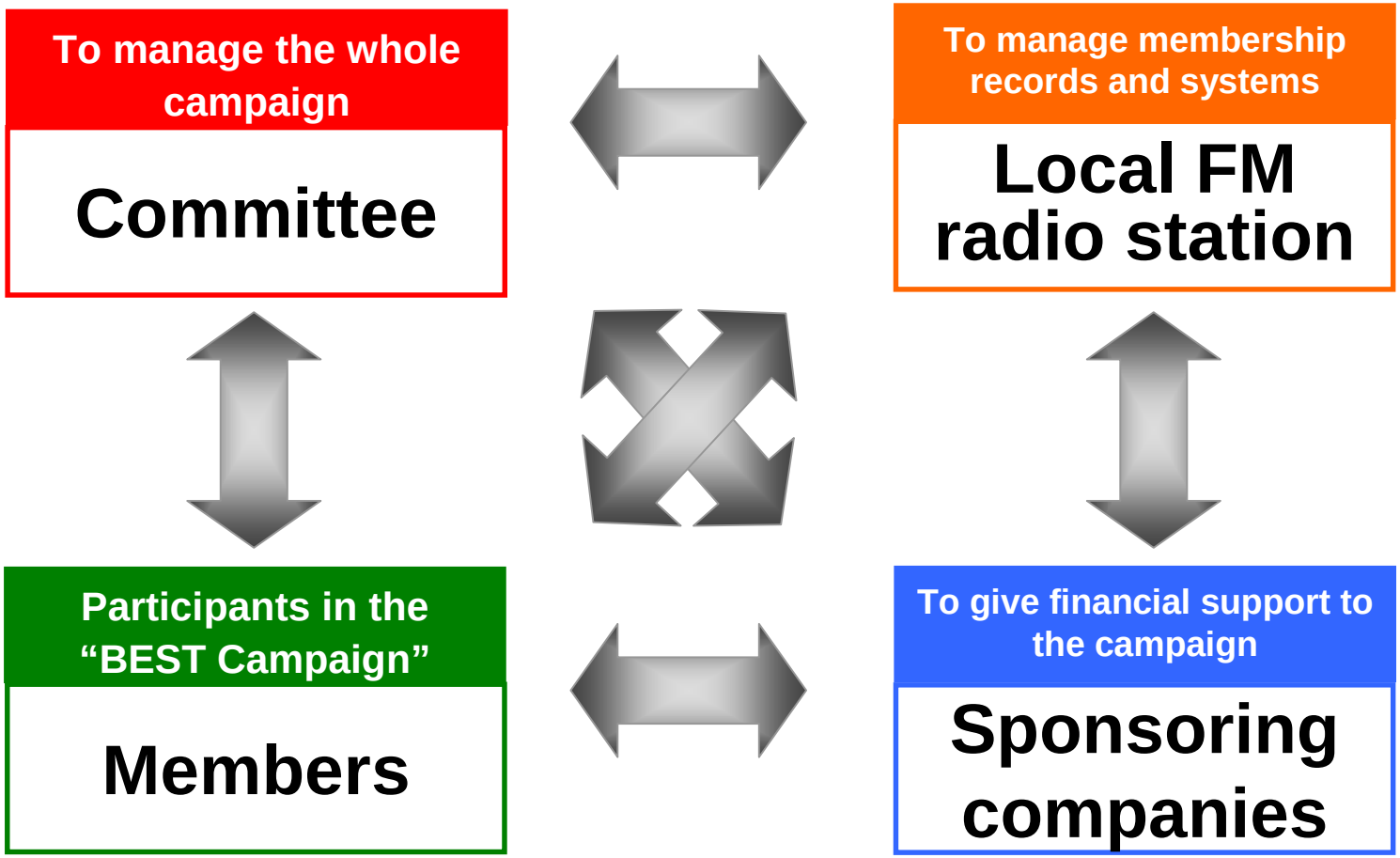
BEST members

Number of participants of the previous month and effects to shorten the time,

Reduce lost time caused by traffic jams・CO_2 emission amounts (quick estimation)

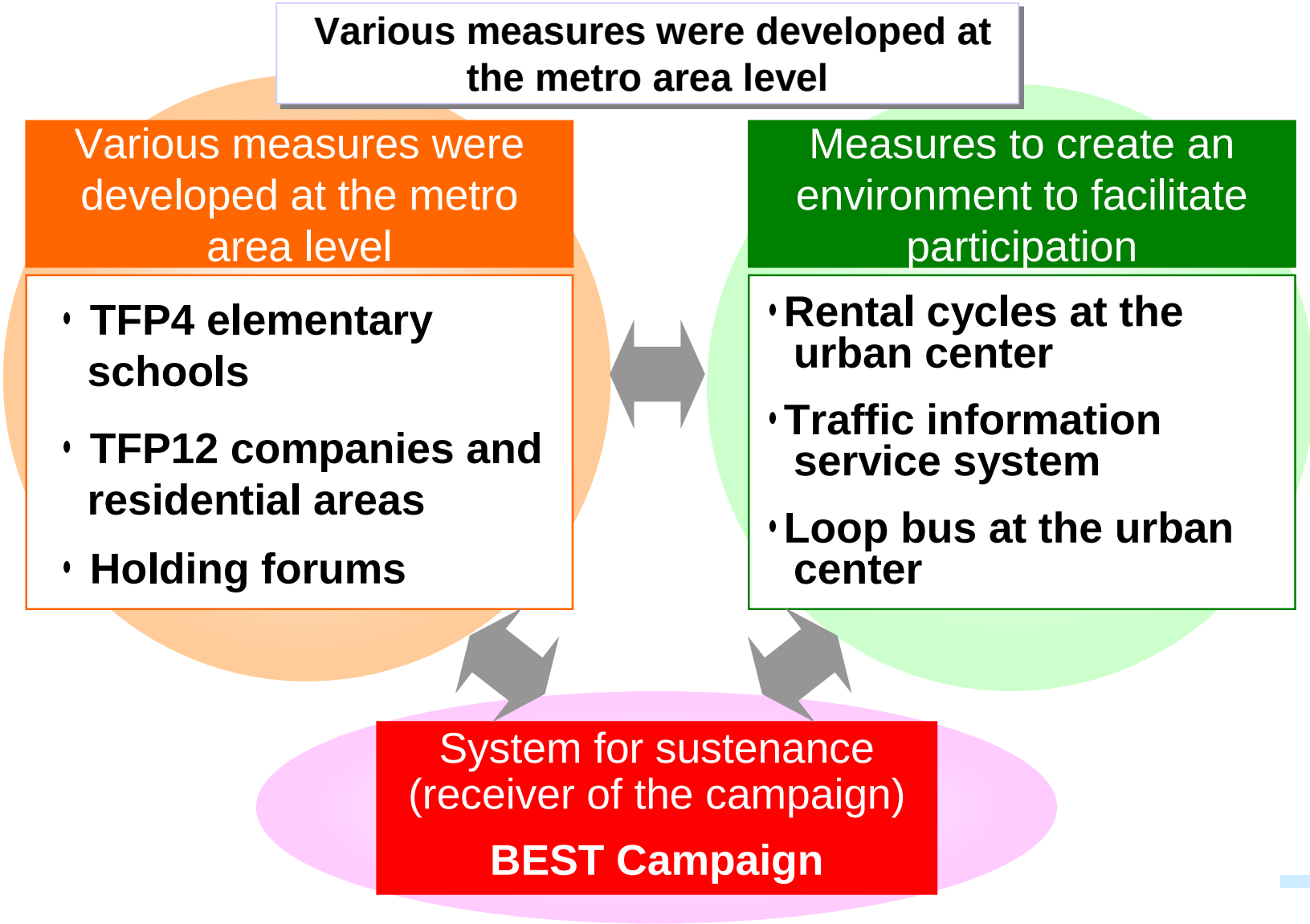
Characteristics of the “BEST Campaign” (3/3)

Characteristic 3: Making a system to sustain the campaign

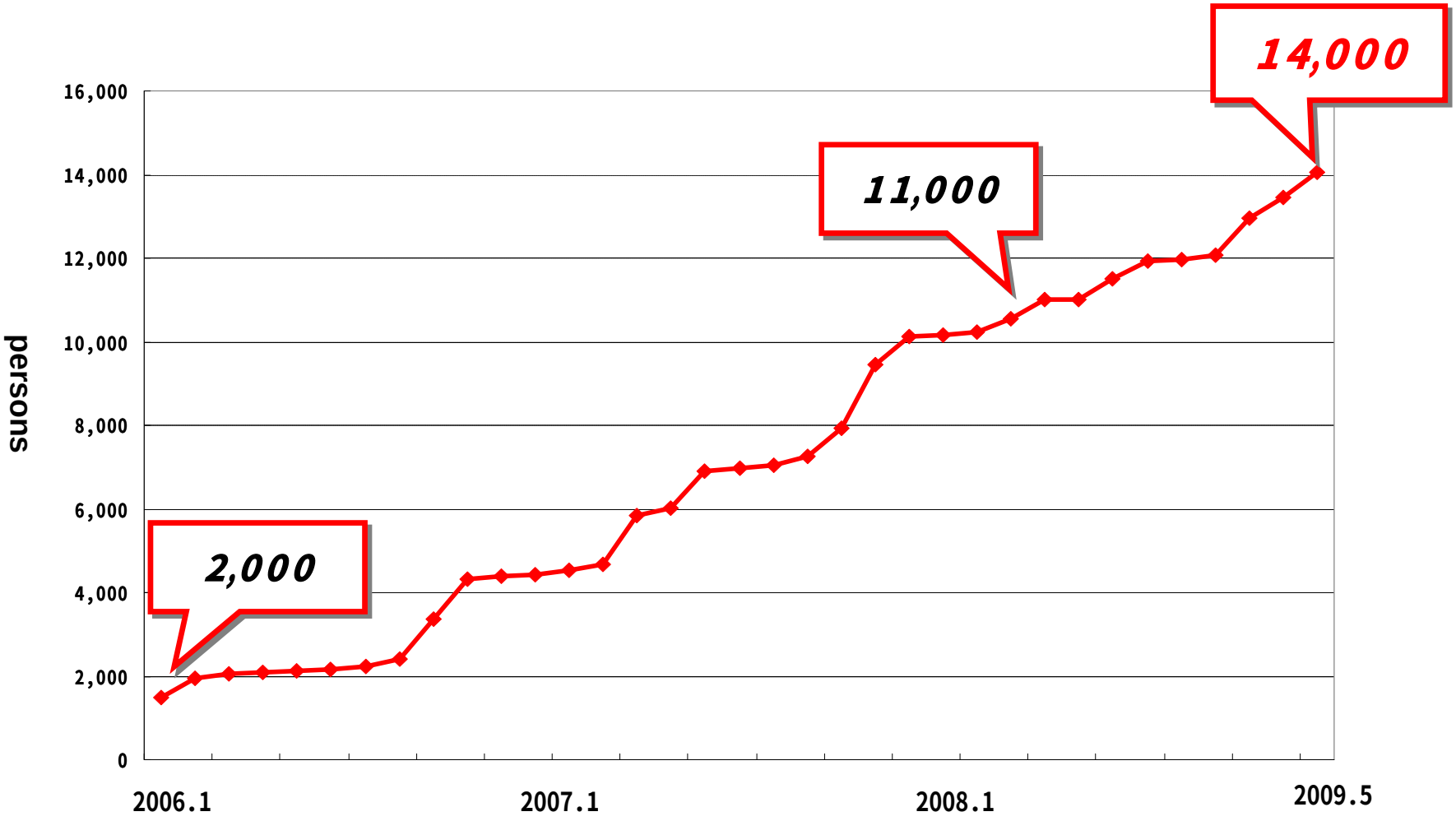


To popularize and establish the “BEST Campaign”

Support measures to popularize and establish the “BEST Campaign”



Transition of the number of BEST members



Cost–benefit performance of Fukuyama MM (BEST Campaign)

Result of calculated effects

Effects on the whole metro area

※Effects on the whole metro area

At peak hours

Reduced amount of lost time by congestion (2002–2007)

About 2,060,000 person hours / year

At peak hours

Reduced amount of CO2 emissions(2002–2007)

About 11,000t-CO_2/year

Effect of the BEST Campaign

※Effect at the time point with 11,000 members

At peak hours

Reduced amount of lost time by congestion (2005–2007)

About 600,000 person hours / year

(About 30% of the total effect)

At peak hours

Reduced amount of lost time by congestion (2002–2007)

About 7,000t-CO_2/year

(About 60% of the total effect)

Cost–benefit performance of the "BEST Campaign"

Benefit: 1.77 billion yen

- Reduction effect of lost time by congestion

  About 600,000 person hours/year→1.75 billion yen

- Reduction effect of CO_2 emission

  About 7,000t-CO_2/year →0.02 billion yen

Cost: 0.27 billion yen

- Making the system
- PR activity
- Field survey to determine effects
- Elementary School TFP
- Company and residential area TFP
- Rental cycles at the urban center
- Traffic information service system

Cost–benefit performance of the "BEST Campaign"

B/C 7

Conclusion

1) The “BEST Campaign” was popularized and established by producing the system in cooperation with citizens, companies, partners (local FM radio station), administration (committee), and by promoting measures for settlement.

2) By implementation of the “BEST Campaign,” the reduction effect of lost time by congestion was about 600,000 person hour / year and the reduction effect of CO_2 emissions was about 7,000t-CO_2 / year. The cost–benefit performance is “7”; the validity of MM was confirmed at the metro area level.

3) For further development of the “BEST Campaign,” civic campaign familiarization and further environmental arrangements, including improved public transportation facilities, are necessary.

The end