

Deliverable 4.1 – Evaluation Plan

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MOBI

**PROMOTING
SMART
MOBILITY
TO
EMPLOYEES**

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Contents

Introduction	5
1. Evaluation approach	6
1.1. The MaxSumo approach.....	6
1.2. Application to MOBI.....	7
2. Indicators, targets and Methods of Monitoring	9
3. Plan for monitoring and evaluation activities	13
Annex I – Initial questionnaire to employees	16
Annex II – Baseline conditions	16
Annex III – Final questionnaire to players	20
Annex IV – Data to include in ‘Feedback to local sites ‘	23

Tables

Table 1 – Target groups, services provided and mobility option offered.....	7
Table 2 – Levels of assessment and types of application in MOBI.....	8
Table 3 – MOBI evaluation indicators, targets and methods of monitoring.....	10
Table 4 – (Minimum) number of companies and participants.....	12
Table 5 – Tasks per partner and deadlines.....	14
Table 6 – Time plan of WP4 activities, deliverables and other internal milestones.....	15

Figures

Figure 1 – MaxSumo’s monitoring and evaluation Assessment Levels.....	6
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Introduction

This document describes the evaluation plan of the MOBI project.

The **MOBI project** aims to achieve a shift of travel choices from the car to sustainable modes of transport among employees on their trips from home to work. Its strategy is to involve workers in playing a game – From5To4 – which motivates them to try and use sustainable modes at least once a week.

The evaluation of MOBI has three main **goals**:

- Assess and evaluate overall (i) project's activities, (ii) outcomes and levels of (iii) energy savings against the proposal objectives.
- Provide feedback to the sites on how to improve the local marketing plan and game playing
- Strengthen the evidence of the success of the MOBI concept for other sites

The evaluation **methodology** is based on MaxSumo¹, a methodology which was developed with a focus on Mobility Management measures.

This document includes the following sections:

1. A description of the MaxSumo evaluation approach and its translation to the scope of the MOBI activities.
2. A definition of indicators, targets and methods of monitoring of the project activities and outcomes.
3. A plan for monitoring the evaluation activities

Finally, it includes in Annex four specific inputs for the evaluation:

Annex I – Initial questionnaire to employees

Annex II – Baseline conditions

Annex III – Final questionnaire to players

Annex IV – Data to include in 'Feedback to local sites

¹ *MaxSumo Guidance on how to plan, monitor and evaluate mobility projects*. Prepared by P. Hyllenius, L. Smidfelt Rosqvist (Trivector), S. Haustein, J. Welsch (ILS), M. Carreno and T. Rye (ENU) for the MAX project, 6th Framework Program, European Commission, August 2009.

1. Evaluation approach

1.1. The MaxSumo approach

The monitoring and evaluation of the MOBI project will follow the approach of MaxSumo, which provides a suitable and comprehensible framework for evaluation of mobility projects aimed at behavioural change. The method can also assist better project planning and in setting relevant and realistic goals.

The main rationale of MaxSumo is that the often complex process of behavioural change is divided into smaller steps that can actually be successively monitored and evaluated. Thereby, possible deviations can be corrected at an early stage.

Following from this, MaxSumo establishes a set of assessment levels. The assessment levels cover the whole process from activities carried out, awareness, usage, acceptance and satisfaction with the mobility services provided, and finally, effects in terms of new attitudes adopted, and behaviour and system impacts. The assessment levels are co-ordinated in a systematic way, and allow direct monitoring of the project effects during its implementation.

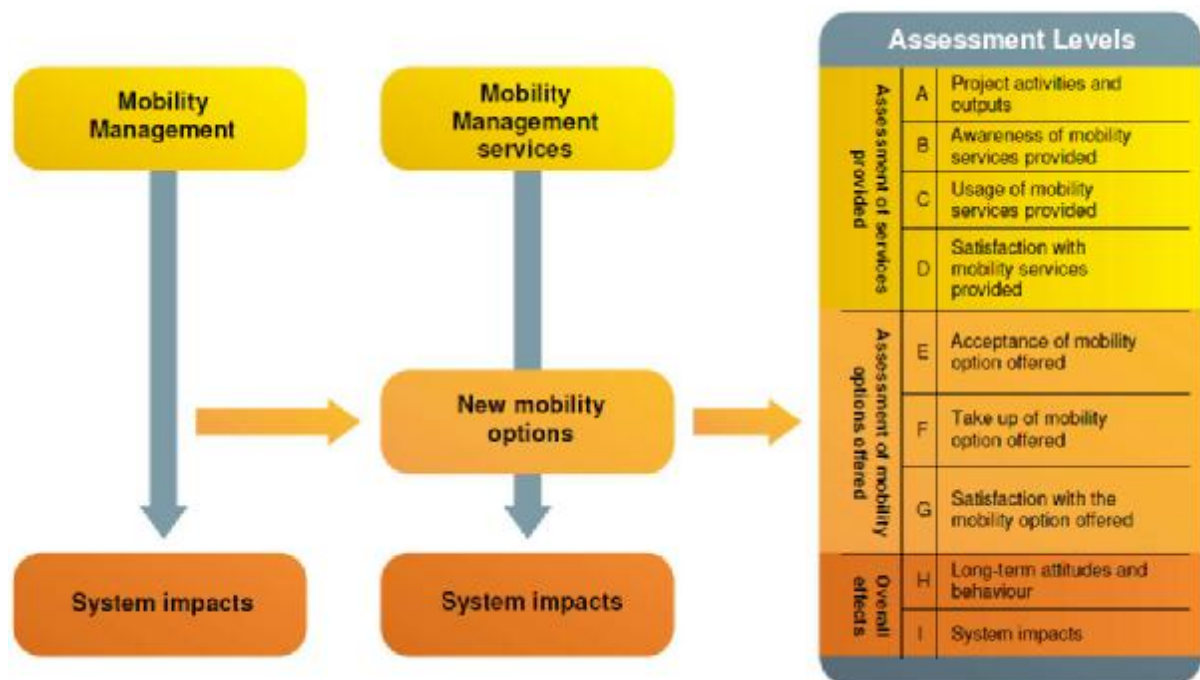


Figure 1 – MaxSumo’s monitoring and evaluation Assessment Levels

MaxSumo should – preferably – be used from the start, in the project planning stage. At this point, all essential preparations for an effective evaluation should be carried out, including defining the overall goals, the target groups, the services provided and the desired new behaviour. At all levels users need to decide what to measure, which indicators to use and how to measure these. They can also decide to skip some levels - in some projects it is neither possible nor necessary to monitor all levels, simplifying the process where appropriate. The planning stage produces a

Monitoring and Evaluation Plan (MEP) for the actual project, which is then used in its monitoring and evaluation.

1.2. Application to MOBI

The first step to applying the MaxSumo approach to MOBI is to clarify which are the target groups, the services provided by MOBI and the related mobility options offered. The direct target group of MOBI, i.e. the end population for realization of changes in mobility choices, are the employees of companies or other institutions. The indirect target group, (i.e. not the direct users of the mobility options promoted), are the companies or institutions themselves. The service provided to them is the possibility to enrol in a game about mobility choices. From the perspective of the companies/institutions, the game represents a tool to achieve a number of objectives including: increased employee satisfaction, healthier workforce, an increase in their productivity, and a positive image of corporate social responsibility.

Table 1 – Target groups, services provided and mobility option offered

Target groups	Direct group Employees of companies or institutions	Indirect group Companies and institutions
Services provided	The possibility to enrol in a fun game about sustainable mobility	A game for workers which is fun and persuades them to use sustainable mobility options, promoting their satisfaction and productivity. Ability to learn more about the mobility behaviour of its employees. Opportunity to implement Corporate Social Responsibility objectives.
Mobility option offered	Sustainable mobility options available at local level (e.g. public transport, bicycle, walking) or promoted by workplace (e.g. carpooling, work from home)	A platform to assess and promote the case for sustainable internal mobility options (e.g. carpooling system, teleworking, cycle mileage allowance, re-imbursment of public transport)

The second step is to identify how the MaxSumo levels of assessment apply to the MOBI activities. Also it is relevant to question if all the assessment levels are appropriate in the scope of MOBI. We concluded that all of them are relevant for the MOBI evaluation. Table 2 describes the application in MOBI of the nine assessment levels.

Table 2 – Levels of assessment and types of application in MOBI

Levels of assessment (Max Sumo)	Application in MOBI
ASSESSMENT OF SERVICES PROVIDED	
A – Project activities and outputs	MOBI activities and outputs
B – Awareness of mobility services provided	Awareness of F5T4 game by relevant stakeholders
C – Usage of mobility services provided	Level of use of F5T4 among stakeholders and individuals
D – Satisfaction with mobility services provided	Level of satisfaction with F5T4 among stakeholders and individuals
ASSESSMENT OF MOBILITY OPTIONS OFFERED	
E – Acceptance of mobility option offered	Acceptance of alternative mobility options promoted by F5T4
F – Take up of mobility option offered	Take up of alternative mobility options promoted by F5T4
G – Satisfaction with the mobility option offered	Satisfaction of alternative mobility options promoted by F5T4
OVERALL EFFECTS	
H – Long-term attitudes and behaviour	Long term take up of alternative mobility options promoted by F5T4
I – System impacts	Long term impacts on energy and CO2e emissions

The following step is to identify indicators, targets and methods for monitoring each of the assessment levels.

2. Indicators, targets and Methods of Monitoring

Each level of assessment will include quantitative indicators that enable the progress of activities, their outputs and results to be assessed.

The F5T4 tool is a helpful tool to obtain data on the outputs and outcomes of the project. It registers in a database elements like the number of participants, their participation level and the evolution of their travel behaviour. The ability to gather and display information is one of the strengths of the MOBI approach.

Qualitative information is still crucial to obtain a sound evaluation. The collection and analysis of quantitative data will be combined with a qualitative assessment. The MOBI local implementation staff will report on their qualitative interpretation on the results within each level of assessment. Such inputs will be requested within the two foreseen surveys providing 'Feedback to local sites'.

The targets set from the start of the project were linked to the relevant levels of assessment. Additional targets were included where relevant. Table 3 provides a detailed description of the MOBI evaluation indicators, targets and respective methods of monitoring for each level of assessment.

Each indicator and target has one or more data collection techniques. The F5T4 tool database provides data on participation level and behaviour, but other sources of information are required. They are the following:

- a. Reporting by MOBI local staff
- b. F5T4 database
- c. Final questionnaire to organizations
- d. Initial questionnaire to F5T4 players
- e. Final questionnaire to F5T4 players



Table 3 – MOBI evaluation indicators, targets and methods of monitoring

LEVEL OF ASSESSMENT	INDICATORS	TARGETS	METHOD OF MONITORING
ASSESSMENT OF SERVICES PROVIDED			
A – Project activities and outputs	<ol style="list-style-type: none"> 1. Posters hung at participating companies 2. National events held 3. Articles published 4. Number of stakeholders approached (email, meeting...) 	<ul style="list-style-type: none"> ▪ 1.000 posters hung * ▪ 6 national events ▪ 12 articles (6 national, 6 local) ▪ Each partner approaches at least 1 public transport provider, 2 local authorities, 1 electric vehicle company and 5 local authorities 	a. Local staff reporting (all)
B – Awareness of mobility services provided	<ol style="list-style-type: none"> 1. Number of stakeholders approached 2. Appearances in press 3. Stakeholders (not approached) showing interest in MOBI 4. Employees taking notice of campaign through promotion materials 5. % participants who say they would recommend the game to peers in other organisations 	<ul style="list-style-type: none"> ▪ 18 appearances in press ▪ 18 stakeholders approach MOBI consortium ▪ 100.000 employees take notice of campaign through materials * ▪ 70% participants would recommend game to peers in other organisations. 	a. Local staff reporting (1-4) e. Questionnaire to players (5)
C – Usage of mobility services provided	<ol style="list-style-type: none"> 1. Number of stakeholders using F5T4 2. Number/percentage of individuals registered 3. Number/percentage of individuals participating each period 	<ul style="list-style-type: none"> ▪ Number of stakeholders: see Table 4 ▪ 23.400* registered employees engaging in the game ▪ 50% of registered employees participate each period 	b. F5T4 database (all)
D – Satisfaction with mobility services provided	<ol style="list-style-type: none"> 1. Organizations that continue to apply F5T4 after first usage 2. Individuals who continue to engage with F5T4 after first usage 3. Satisfaction rating by users 4. Players recommend the game to peers in other organisations 5. % participants who recommend the game to peers in other organisations 	<ul style="list-style-type: none"> ▪ 70% of organizations continue to apply F5T4 after first usage ▪ 75% of individuals continue to engage with F5T4 after first usage (first week) ▪ 25% participants recommend game to peers in other organisations. 	b. F5T4 database (1,2) e. Questionnaire to players (4)

LEVEL OF ASSESSMENT	INDICATORS	TARGETS	METHOD OF MONITORING
ASSESSMENT OF MOBILITY OPTION OFFERED			
E – Acceptance of mobility option offered	1. Opinion on quality of each accessibility option	Measured through F – Take up of mobility option offered	-
F – Take up of mobility option offered	1. Number of individuals who tried accessibility option X** 2. Number of users who definitely changed to option X 3. % variation of trips of option X 4. % change from car to smart options	<ul style="list-style-type: none"> ▪ 50% of individuals try a new option for the first time as a result of From5To4 ▪ 11.700 new employees use an alternative smart option at least once a week * ▪ 20% change to smart options among car users 	b. F5T4 database (all) e. Questionnaire to players (all)
G – Satisfaction with the mobility option offered	2. Opinion on quality of each accessibility option	<ul style="list-style-type: none"> ▪ 0.2 points increase on opinion on quality of smart options (on a 1 to 5 scale) 	e. Questionnaire to players
OVERALL EFFECTS			
H – Long-term attitudes and behaviour	1. Number of car trips definitely changed to smart options 2. Opinion on quality of each accessibility option 3. Likelihood to use each smart option in future	<ul style="list-style-type: none"> ▪ 20% change to smart options among car users ▪ 0.2 points increase on opinion on quality of smart options ▪ 0.2 points increase on likelihood to adopt smart accessibility options in future 	b. F5T4 database (1) e. Questionnaire to players (all)
I – System impacts	1. Reduced car km [per user; total] 2. Energy savings (toe) 3. CO2e emission reduction	<ul style="list-style-type: none"> ▪ 23.400 x 50% car users x 20% change x 7 km = 16.380 km/week * ▪ 16.380 km x 60*10⁻⁶ toe/km = 1 toe/week * ▪ 16.380 km x 170 g CO2e/km = 2,8 ton CO2e/week * 	f. Calculations (all)

* - These targets apply to each site proportionally to the respective number of companies targeted (Table 4)

** - X = vector of mobility options considered.



Table 4 – (Minimum) number of companies and participants

Country	Cities	Year 1		Year 2		Total	
		Companies	Participants	Comp.	Part.	Comp.	Part.
Netherlands	2	10	2.000	20	4.000	30	6.000
Belgium	2	10	2.000	20	4.000	30	6.000
UK	2	10	2.000	20	4.000	30	6.000
Portugal	1	3	600	6	1.200	9	1.800
Romania	1	3	600	6	1.200	9	1.800
Bulgaria	1	3	600	6	1.200	9	1.800
Total	9	39	7.800	78	15.600	117	23.400



3. Plan for monitoring and evaluation activities

The tasks of WP4 are the following:

- Task 4.1 Evaluation Plan, baseline and context questionnaires
- Task 4.2 Feedback to local sites on energy and emission performance (intermediary and final)
- Task 4.3 Overall overview of energy and emission potential of the MOBI concept from, and for follower cities and member states
- Task 4.4 Development of final MOBI concept set-up and operation guidelines
- Task 4.5 Evaluation Comparison

The MOBI evaluation includes the following deliverables:

- D4.1: Evaluation plan written in English, baseline and context questionnaires ready for translation
- D4.2: Intermediate and final feedback to sites on good practices, energy and emission performance
- D4.3 Finalised context and market potential of 2 other sites in participating countries and 6 other member states
- D4.4 Final updated Methodology, operational guidelines and exploitation plan
- D4.5: Evaluation Comparison and benchmark reports

Deliverables 4.2 compile the evaluation results, analyse and synthesise lessons from the implementation in the MOBI sites. They also provide a monitoring on the attainment of the specific and global targets of MOBI. They will include an analysis of all the levels of assessment of the evaluation approach and will take into account the framework conditions of each site. Complementarily, Deliverables D4.5 will deliver an external comparison and benchmarking of the results between sites.

Other specific internal tasks relevant for planning will be the following:

- I4.1: Translation of questionnaires to companies and employees
- I4.2: Incorporation of inputs for evaluation in F5T4 tool
- I4.3: Feedback reporting from local sites and F5T4 database
- I4.4: Internal presentation and discussion of preliminary results (WP3)

The questionnaires for companies and employees must be ready before the start of the local experiences. They will be translated and, in the case of employees, included in the F5T4 tool.

Two months before each feedback to sites (D4.2), the sites will report quantitative and qualitative process evaluation information (I4.2). Two partners (ABMEE and EAP) will also provide an expert opinion in the scope of D4.5 on the comparison of results. For the qualitative assessment, TIS will prepare specific questionnaires covering the various levels of assessment.



Additionally to the above activities and deliverables, in order to promote a better and more continuous learning it is proposed that the MOBI activities will include regular six-month internal reporting, interpretation and discussion of results. The MOBI consortium meetings will be used for this. A template with issues to report and discuss will be provided by TIS/DTV at each stage.

In addition to this consortium level evaluation, all the partners are strongly advised to monitor their activities and results on a continuous basis in order to better operate and adjust the application F5T4 in their target companies and institutions. This ongoing assessment and evaluation is included in the scope of Work Package 3.

The allocation of tasks to the MOBI partners and deadlines is specified in Table 5, and the time plan for the activities is described in



Table 6.

Table 5 – Tasks per partner and deadlines

Partner responsible	Activities	When (month #)
All partners	<ul style="list-style-type: none"> ▪ Translation of questionnaires to companies and employees (I4.1) ▪ Feedback reporting from local sites (I4.2) ▪ Internal presentation and discussion of results (I4.3) 	6 19, 33 6, 12, 18, 26
TIS	<ul style="list-style-type: none"> ▪ Evaluation plan and questionnaires ready for translation (D4.1) ▪ Intermediate and final feedback to sites (D4.2) 	5 21, 35
DTV	<ul style="list-style-type: none"> ▪ Finalised context and market potential (D4.3) ▪ Methodology, operational guidelines and exploitation plan (D4.4) 	35 35
Ext. partner - G. Mingardo	<ul style="list-style-type: none"> ▪ Evaluation comparison - methodology ▪ Evaluation comparison – benchmark reports (D4.5) 	5 21, 35



Table 6 – Time plan of WP4 activities, deliverables and other internal milestones

Phase / Duration of the action (in months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	
4.1. Evaluation Plan																																					
4.2. Intermediate & Final Feedback Reports																																					
4.3. Finalised context and market potential																																					
4.4. Final updated methodology, operational Guidelines & exploitation plan																																					
4.5. Evaluation Comparison																																					
Deliverables	D4.1							D4.2										D4.2																			
																		D4.5										D4.5									
																							D4.3										D4.4				
Internal milestones				I4.1		I4.2		I4.4				I4.4		I4.3		I4.4						I4.3															



Annex I – Baseline conditions

The baseline conditions of organisations will be assessed, in order to define local strategies and analyse the results considering those conditions. The scope of assessment is the whole company, office, or population of workers that will be targeted by the game. If different locations/offices are targeted, the description could specify them separately.

The local MOBI partners with the support of the target organizations will describe the following baseline conditions:

Type of business / activity	
Number of workers targeted	
Mobility options available	
- Public transport	
Is this an option available to most workers? (yes/no)	
Types of PT available (bus, metro, train...)	
PT tickets reimbursed by employer?	
- Bicycle	
Accesses with pathways appropriate for cycling? (including cycle pathways and/or shared traffic with safety conditions for cycling)	
Bicycle parking facilities in or near office?	
Showers for cyclists available for employees?	
Does the employer give any incentives for cycling? Which?	
- Car	
Are there congestion problems accessing the organisation/office by car?	
Are there enough parking places available for the demand?	
Are there free parking places for most employees?	
Are company cars given to employees for commuting?	
Socio-economic characterisation of the employees addressed (no precise data needed, rough estimations sufficient)	
% employees with higher education	
% employees with a car available	



Average age employees				
Modal split				
Within addressed employees (if available)	Car: Other:	PT:	Walk:	Bicycle:
OR Locally (city or region) (if available and representative of the organization/office)	Car: Other:	PT:	Walk:	Bicycle:



Annex II – Initial questionnaire to players

The objective of this questionnaire is to obtain information from the users of the F5T4 tool regarding relevant attitudes for predicting mode choice and targeting messages to users.

On the basis of research about the attitudes of people towards mobility and sustainability issues, the SEGMENT² project has developed a set of characteristic segments of people. It defined a set of Golden Questions which can be used to the segments of respondents. The segments are used to target messages to each group more effectively, according to the common preferences of each segment.

The following table outlines the SEGMENT segments and their main characteristics.

SEGMENT Segments	Car use	Intention to use sustainable mobility	Ability to influence behaviour	Relevant attitudes / drivers of behaviour
1. Devoted Drivers	++	0	0	<ul style="list-style-type: none"> • Believe successful people use car
2. Image Improvers	++	+	+	<ul style="list-style-type: none"> • Cycling (and maybe walking) may be good for their image
3. Malcontented Motorists	++	+	++	<ul style="list-style-type: none"> • Do not like driving but still use the car • Prefer PT to cycling
4. Active Aspirers	+	++	++	<ul style="list-style-type: none"> • Environmentally conscious • Care for their health • Prefer cycling to PT
5. Practical Travellers	+	+	+	<ul style="list-style-type: none"> • Use car only for getting from A to B • Have practical motives for their choices
6. Car Contemplators	0	0	+	<ul style="list-style-type: none"> • Similar attitudes to devoted drivers or image improvers, but still don't own a car
7. Public Transport Dependents	0	+	0	<ul style="list-style-type: none"> • Cannot/do not like to drive
8. Car-free Choosers	0	++	0	<ul style="list-style-type: none"> • Think that cars lead to unhealthy lifestyles • High moral commitment to environment • Cycling as route to self-expression

The Golden Questions questionnaire is available at www.segmentproject.eu/segmentationquiz and is free for use in other projects. It will be translated in the local languages of the countries/regions participating in MOBI.

² www.segmentproject.eu/

In MOBI the questionnaire to employees is optional for players of From5To4. It is desirable that the highest number possible will complete it. Survey completion is not a mandatory, but requirement for participation; ensuring that it is not seen as a barrier to entry for participants who do not want to provide further information.



Annex III – Final questionnaire to players

The final questionnaire to players intends to evaluate the long-term impacts of the From5To4 game and the success of the game as an attractive and helpful tool among its players.

The questionnaire to players should be sent to the employees of the participating organisations about 6 months or more after the end of the experience with the From5To4 game in the organisation in question.

The questions below are foreseen. The related indicators and targets are described in Table 3.

Questionnaire:

Note: The following questions should be responded in respect to travel to and from work trips.

Have you tried any of these accessibility options as a result of playing From5To4?

(tick if yes)

- | | | |
|------------------|--------------------------|--------------------------|
| Public Transport | <input type="checkbox"/> | |
| Bicycle | | <input type="checkbox"/> |
| Walking | <input type="checkbox"/> | |
| Car | <input type="checkbox"/> | |
| Car sharing | <input type="checkbox"/> | |
| Car pooling | <input type="checkbox"/> | |
| Work from home | <input type="checkbox"/> | |

[note for local implementers: adapt list to local needs, but keep the first 4 options like they are for comparison purposes]

How many days a week on average did you use the accessibility option _____ before the beginning of the game and after the end of the game?

	Before		After
Public Transport	___		___
Bicycle		___	___
Walking	___		___



Car	—	—
Car sharing	—	—
Car pooling	—	—
Work from home	—	—

[note for local implementers: adapt list to local needs, but keep the first 4 options like they are for comparison purposes]

How has your opinion on the quality of accessibility option _____ evolved between the time before playing the game and now?

(1 – Much worse opinion, 2 – Worse opinion, 3 – Same opinion, 4 – Better opinion, 5 – Much better opinion)

Public Transport	—	
Bicycle		—
Walking	—	
Car	—	
Car sharing	—	
Car pooling	—	
Work from home	—	

[note for local implementers: adapt list to local needs, but keep the first 4 options like they are for comparison purposes]

How has the likeliness that in the future you will use _____ evolved between the time before playing the game and now?

(1 – Much less likely, 2 – Less likely, 3 – Same likeliness, 4 – More likely, 5 – Much more likely)

Public Transport	—	
Bicycle		—
Walking	—	
Car	—	
Car sharing	—	
Car pooling	—	



Work from home _____

[note for local implementers: adapt list to local needs, but keep the first 4 options like they are for comparison purposes]

Would you recommend the From5To4 game to friends working in other companies?

(1 – Definitely no, 2 – No, 3 – Not sure, 4 – Yes, 5 – Definitely yes)



Annex IV – Data to include in the ‘Feedback to local sites’

Feedback to participating organisations will be provided by the local MOBi team twice: in the middle of the game play and after the end of the game.

The results that will be distributed to organisations in the two reports will be the following:

- Number of participants registered
- Number of participants regularly participating (more than 70% of days filled in)
- Profile of participants in terms of attitude segments: % of participants per segment
- Baseline profile of trips made:
 - modal split
 - average distance
 - modal split for 3 different distance groups (short (up to 2 km), medium (between 2 km and 6 km) and large distance (more than 6 km))
- Final profile of trips made:
 - modal split
 - modal split for 3 different distance groups (short (up to 2 km), medium (between 2 km and 6 km) and large distance (more than 6 km))
- Variation of number of trips in each mode (absolute and %)
- Variation of (absolute and %):
 - CO2 emissions
 - Energy consumption
 - Calories burnt
 - Savings
 - Estimated rate of absenteeism
- Results of final questionnaire to players (2nd report only)

