

D2.2: MOBI game philosophy, organisation and rules (branding)

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Contents

1	Introduction to MOBI	5
1.1	What is MOBI?	5
1.2	Who is MOBI aimed at?	5
1.3	Aim of this document.....	5
2	Introducing Gameification	6
2.1	What is Gameification?.....	6
2.2	Gamification – Motivational Factors	6
2.2.1	Competence Need.....	7
2.2.2	Autonomy Need.....	7
2.2.3	Mastery of Controls	7
2.2.4	Relatedness Need.....	7
2.2.5	Scarcity Effect.....	7
2.2.6	The Endowed Progress Effect.....	7
2.2.7	Consistency and Commitment	7
2.2.8	Random Reward Schedules.....	8
2.2.9	Environmental and Economic Concerns	8
3	MOBI Commuter Challenge	9
3.1	Overview of the Methodology	9
3.2	Step 1: Develop a MOBI Challenge Action Plan	10
3.2.1	Local Risk Planning	10
3.3	Step 2: Identify the geographical area	10
3.4	Step 3: Identify the key stakeholders	11
3.4.1	Securing Rewards from Stakeholders.....	11
3.5	Step 4: Identify the target audience	12
3.5.1	Social Marketing and Segmentation.....	12
3.5.2	Mapping	13
3.5.3	Established networks and forums	13
3.5.4	A ‘Call to Action’	13
3.5.5	Peer to Peer Influence.....	13
3.5.6	The role of a MOBI Champion.....	14
3.5.7	Engaging Employers	14
3.5.8	Engaging Employees	14
3.5.9	Individual Players	14
3.5.10	Teams.....	14
3.5.11	The role of a Team Captain.....	15
3.6	Step 5: Set the timescales for the challenge	15
3.7	Step 6: Raise awareness, publicise and promote	15
3.7.1	Marketing Plan (optional)	16
3.7.2	Communications Plan	16
3.7.3	Apply Crowdsourcing Techniques.....	16
3.8	Step 7: Opportunities for wider synergies	16
3.8.1	Multi Country Competitions	17



3.8.2	Links to Sustainable Urban Mobility Plans, transport, energy and environment policies.....	17
4	Section 4: Playing the Game.....	18
4.1	General	18
4.2	Objective of the Game	18
4.3	Timescales	18
4.4	Organisations Registering to Play the Game	19
4.5	Individuals Registering to Play the Game	19
4.6	Playing the Game	19
4.6.1	Recording Journeys.....	19
4.7	Points.....	20
4.7.1	Earning Points	20
4.7.2	Calculating Points.....	20
4.7.3	Converting points into prizes	21
4.7.4	Individual and Team Ranking.....	21
4.8	Rewards.....	21
4.9	Personalised MOBI Avatar	21
4.10	MOBI Data Output	22
4.11	Data Analysis	22
4.12	MOBI Messages and Pop-Up Tasks	22
4.13	Rules of the Game	22
4.13.1	Rules for Participating Organisations.....	22
4.13.2	Rules for Teams	23
4.13.3	Rules for Employees	23
4.14	Privacy issues.....	23
5	Section 5: Case study examples	25
5.1	DTV Consultants & Organiq New Media (NL).....	25
5.2	Mobiel 21 (BE).....	25
5.3	Erasmus University (NL).....	25
5.4	Verkeersonderneming (NL)	25
5.5	Rotterdam School of Management (NL).....	25
6	ANNEX 1: MOBI Research.....	26
6.1	Research into Motivational Factors	26
6.1.1	Environmental Concerns	26
6.1.2	Competence Concerns.....	26
6.1.3	Relatedness Concerns	26
6.1.4	Autonomy Concerns.....	27
7	ANNEX 2: Frequently Asked Questions	28
7.1	Themes	28
7.1.1	My User Account	28
7.1.2	Team Information	28
7.1.3	Calculating Points.....	28
7.1.4	Recording a Trip.....	29



7.1.5	Business Travel Trips	29
7.1.6	Correcting Travel Data Entry Mistakes.....	29
7.1.7	Targets	30
7.1.8	Reaching Different Levels	30
7.1.9	League Tables.....	30



1 Introduction to MOBI

1.1 What is MOBI?

The MOBI project uses the award winning 'From5To4' (F5T4) commuter challenge tool to encourage travel behaviour change. Its overall aim is to reduce traffic by 20% in the peak hours by encouraging employees to travel more smartly (e.g. walking, cycling, public transport, car sharing and working from home).

MOBI seeks to combine travel behaviour change with game elements in order to encourage active participation and a willingness to achieve quality results. This in turn leads to more participation and chances of achieving pre-defined goals.



1.2 Who is MOBI aimed at?

Any organisation that experiences accessibility problems, wants to pursue sustainable management and help their employees make a positive difference in their local area. Organisations are encouraged to participate in the game by outlining the benefits it could bring to themselves and their employees.



1.3 Aim of this document

The aim of this document is to provide mobility management implementers with practical information about the MOBI game, how it works, how it can support a wider travel behaviour change campaign and culture, advice on how to implement the game within organisations and how to plan supporting awareness raising and campaign launch events.

The main task of this document is to present the MOBI Game Philosophy, organisation and rules.



It begins by outlining 'Gamification' and the various motivational factors to maintain players involvement. It goes on to explain the MOBI Commuter Challenge methodology and ends with a description of how to play the game and its rules.

2 Introducing Gamification

2.1 What is Gamification?

'Gamification' refers to the use of game thinking, design and mechanics in a non-game context to engage people and enhance learning. Nick Pelling, the computer programmer who coined the term in 2002, said it means "applying game-like accelerated user interface design to make electronic transactions both enjoyable and fast".

The idea is that the more an interface feels like a fun game, the more likely users are to embrace it. Players are more engaged when they are rewarded for completing tasks either virtually through the use of points, achievement badges or levels, ranking status, progress bars and currency to buy inanimate objects or via vouchers to be exchanged for products in shops, cafes, restaurants or other services.

The use of gamification applications, including customer loyalty programmes, has been widely applied in marketing circles. For examples, in 2010 Starbucks gave Foursquare badges to customers who visited multiple locations and offered discounts.

But our understanding of how such tools and techniques can be applied to the transport sector to encourage changes in travel behaviour is fairly limited. This MOBI project aims to address that gap in knowledge by working with leading academics in a variety of different fields, including communication science, games design, media arts and psychology, to better understand the opportunities available to encourage behaviour change through online gaming.

Friendly competition is a great way to motivate people and it builds on their natural desires for achievement, status, self-expression and altruism. MOBI seeks to do exactly this by using gamification techniques and tools to communicate a serious message in a fun way using 'Commuter Challenge' tools. Commuters who use sustainable modes to travel to work and complete other tasks (including completing surveys, performing buddying roles or attendance at events) are rewarded and their points are visible on individual and team leader boards.

Each player has his/her own bespoke avatar, which also acts as a mascot, to incentivise positive behaviour and maintain interest in the game.

2.2 Gamification – Motivational Factors

'Hooks' or motivational factors are used by game designers to encourage initial and repeated play. Understanding the reasons why individuals continue to participate in a game and supply personal information is important for those seeking to implement the F5T4 game in their local area.

Przybylski *et al*¹ examined four motivational factors or needs which are believed to relate to the experience of the player and their willingness to continue to invest time in a game. Such factors include:

¹ Przybylski AK., Ryan RM., and Scott Rigby.,C (2010) A motivational model of video game engagement, in Review of General Psychology 2010, Vol 14, No.2, pp154-166.

2.2.1 Competence Need

- Essentially related to the challenges which are graded to the competence of the individual playing the game. The game has to be sufficiently challenging to make the individual feel they have achieved a level of competence if they are successful and has to be reinforced with appropriate and positive feedback.

2.2.2 Autonomy Need

- The ability of the individual taking part to shape to game or have a unique / individual experience.

2.2.3 Mastery of Controls

- Whilst self explanatory, the game should be easy to access and to control, ensuring that any challenge is with regards to the game itself rather than an inability to control / interface effectively.

2.2.4 Relatedness Need

- Particularly relevant when playing games with a social or team element. This need refers to social Interaction, allowing development of social bonds, cooperation and competition.

In addition to the above, other types of psychological motivational factors² include:

2.2.5 Scarcity Effect

- Value is generally placed on scarce things more highly, which is further reinforced by a response to a perceived loss of choice called psychological reactance. This refers to individuals often placing a higher value on things expected to become unavailable than readily or continually available alternatives, (even though they may not actually be as / more attractive an option).

2.2.6 The Endowed Progress Effect

- Based upon individual's general unwillingness to leave a partially completed job unfinished. Features such as progress bars, records of percentage completion, sets of cards or icons etc.

2.2.7 Consistency and Commitment

- Individuals are more likely to get / remain involved if there is a perceived commitment made. Example is given of a community poll for the next special offer or event on a website. If the

² As listed on Jamie Madigan's 'Psychology of Video Games' website:
<http://www.psychologyofgames.com/>

option an individual supported or voted for wins, they are more likely to purchase the special offer / get involved in the event in question as they feel a degree of commitment following the voting exercise.

2.2.8 Random Reward Schedules

- Whilst fixed rewards are a motivational factor, greater participation can be secured from a more random reward schedule. The example is given of 'flash' (short term / big discount) sales, where individuals feel compelled to regularly check websites or game front ends in the hope of seeing an item they want. Similarly where rewards are obtained through a degree of chance (roulette / randomised rewards, small chances of greater / rarer items).

In addition to these psychological motivational factors, other factors may also encourage individuals to maintain their interest in the game, including:

2.2.9 Environmental and Economic Concerns

- Information provided about an individual's contribution to CO2 or fuel savings they may realise from changing their travel behaviour may encourage players to reconsider how they travel to work.

For further information about how each of these motivational factors have been applied to the MOBI project, please see **Annex 1**.



3 MOBI Commuter Challenge

3.1 Overview of the Methodology

The MOBI Commuter Challenge can be implemented in any workplace. A simple '7 Step' methodology can be followed to ensure the Challenge is designed and implemented in a similar way. Adopting a similar approach will enable players from different organisations and geographical regions to participate and compete fairly. The 7 steps are:



3.2 Step 1: Develop a MOBI Challenge Action Plan

The first step is to produce a MOBI Challenge Action Plan. The plan will only be as good as the information that is contained within it. It needs to be available to all those who are working to implement a Challenge in a local area or within an individual organisation. It should contain as much information as possible and assign roles to key individuals to ensure everyone involved knows what s/he should be doing and when.

Below is an example of what information needs to be included in such a plan.

MOBI Site	List the local stakeholders to be engaged, when & how	List the organisations you are planning to contact, when & how.	Summarise your MOBI implementation including local risk management plan.	Outline the planned awareness raising events & activities.
Site 1				
Site 2				
Site 3				
Etc				

3.2.1 Local Risk Planning

The MOBI Challenge Action Plan will also need to include an overview of the local risks that may be encountered during the implementation stage of the project. The risks should be outlined and details of what actions should be taken to minimise their impacts. For example:

- **Risk 1:** Participants may decide to stop playing the game.
- **Action 1:** Notify the MOBI project partner. Efforts should be taken to find out why they do not want to play anymore and find out whether any remedial actions can be taken to maintain their involvement;
- **Action 2:** Notify the other members of the team and find out whether they would like to replace the original player;
- **Action 3:** Notify the MOBI tools manager and ask for their log in details to be withdrawn.

3.3 Step 2: Identify the geographical area

A geographical area for implementing the F5T4 game may have already been identified. Such areas may already have problems associated with traffic congestion, or may be wanting to introduce something new to encourage travel behaviour change, or may be planning to construct a new development that is likely to result in additional trips on the road network.

If the area is unknown, there are a number of different strategies that can be introduced to raise awareness about the game and encourage organisations to participate. Strategies may include:



- Publicising the game in local and regional newspapers, radio broadcasts, website blogs, twitter, Facebook and other social media tools.
- Attending conferences and events and delivering presentations about the tools and their effectiveness.
- Use demographic and GIS mapping tools to identify areas where travel to work by car data is high.
- Identify organisations who are participating in other countries that may have an office within the country that is seeking to play the game.
- ‘Cold Calling’ approach to organisations who typically participate in similar initiatives (i.e. Universities, Local Authorities / Municipalities, Call Centres, multiple businesses located on the same Business Park etc).

3.4 Step 3: Identify the key stakeholders

The MOBI Commuter Challenge can be implemented within an organisation with no other support from external organisations. To get the most out of the game, and encourage habitual patterns of sustainable travel behaviour to take place, it is worthwhile contacting other local stakeholders to raise awareness and gain their support. Other local stakeholders could include:

- Politicians and city decision makers and representatives from local Chambers of Commerce.
- Sustainable energy and mobility agencies.
- Public transport operators, car share providers and walking groups.
- Local companies who can offer incentives and rewards e.g. local bike shops, local cafes and restaurants, local gyms or health clubs, public transport discounts etc.

3.4.1 Securing Rewards from Stakeholders

Rewards and incentives are really important. People respond well if their positive behaviour is formally recognised. Rewards can range from virtual prizes, such as points to unlock items for individual avatars, or more traditional incentives such as free public transport tickets, free membership to a car club or a free bike as part of a prize draw. All these incentives reward sustainable travel behaviour and make it easier for people to continue to travel smartly.

The MOBI Challenge Action Plan should also include information about any traditional rewards and prizes that may be offered to individuals and/or teams.

Contacting and securing ‘taster’ incentives from local public transport operators, car club and bike hire organisations in advance of the MOBI project launch is likely to encourage more people to participate in the game. Other benefits also include:

- Participants trialling alternative modes for a short period of time (hopefully resulting in new habitual travel behaviour patterns being formed);
- Participants learning a new skill (e.g. riding and maintaining a bike);
- Participants saving money from using alternative modes.



Care should be taken when selecting rewards and incentives as not everyone will respond positively to the prospect of free public transport taster tickets, particularly in those areas where services are less frequent. Other examples could include:

- A free meal for 2 people at a local restaurant;
- A month's free membership at a local gym / museum / art gallery;
- Vouchers to a variety of different shops / online sites.
- A wider variety of rewards and incentives is likely to result in more people participating in the game.

3.5 Step 4: Identify the target audience

The target audiences for the MOBI Challenge are:

- Employers (organisations) (minimum of 150 employees);
- Employees.

A variety of tools and techniques are available to help Challenge promoters to identify different organisations and employees to target. These include:

- Social Marketing and Segmentation;
- Mapping;
- Established networks and forums;
- A 'Call to Action';
- Peer to Peer Influence.

3.5.1 Social Marketing and Segmentation

The concept of social marketing is not new but it is increasingly being used by transport professionals to better understand the travel behaviour of their target audience. Knowing what information or messages can trigger people to change their behaviour towards more sustainable modes of transport (e.g. walking, cycling, public transport and car sharing/pooling) is crucial to achieve wider societal benefits.

Marketing experts use a variety of tools, including ACORN or Mosaic, to place individuals into different consumer groups. The EU funded SEGMENT project (www.segmentproject.eu) applies segmented marketing techniques to reach target audiences.

The project's Toolkit offers information and resources needed to understand target audiences and determine the messages most likely to motivate them to change their travel behaviour. It provides practical lessons in using consumer market segmentation techniques to improve travel management campaigns. The Toolkit contains:

- A social marketing checklist to review existing campaigns;
- A guide on how to identify target audiences;
- Pen profiles of the eight key consumer segments and their Mosaic equivalents;



- 'Golden Questions' to help with consumer profiling and reference to an online survey tool and data analysis spreadsheet;
- Case studies from campaigns in Europe;
- Recommendations from lessons learned through the SEGMENT project.

Within the Toolkit there is a reference to the National Social Marketing Centre's six-stage planning process for social marketing programmes. The different stages in the planning process are:

- **Getting started** – defining the challenge and initial planning;
- **Scope** – building an understanding of your audience, their motivations and why they behave in certain ways;
- **Develop** – developing an exchange to move an audience to preferred behaviour that is easy to adopt, attractive and popular for that audience;
- **Implement** – delivering the programme and dealing with any issues as they arise;
- **Evaluate** – looking at the effectiveness of the campaign;
- **Follow-up** – sharing your findings and learning with others for future programmes.

Understanding these stages is important for anyone who is planning to approach organisations and individuals about participating in the MOBI project.

3.5.2 Mapping

Once a geographical area has been identified, an easy and free way to identify potential target organisations is to use online maps. Zooming in at a close range will show the location of different workplaces.

3.5.3 Established networks and forums

Contacting established networks and forums to ask them to notify their members about the MOBI Challenge is also an effective approach to targeting organisations and employees.

3.5.4 A 'Call to Action'

Networking at events, conferences and posting alerts on social media tools can be used to request a 'Call to Action'. This is likely to attract interest from a variety of different organisations and employees across a wider geographical area. Care must be taken when selecting which organisations to target.

3.5.5 Peer to Peer Influence

Social media tools have created an environment where far more people's voices are now heard, democratising information and increasing the potential power of every individual to influence behaviours. Marketing influence can be achieved through a person's network group of family, friends, colleagues and peers who share common interests and have earned trust regarding decisions that are taken.

The question that is raised is can the same approach be applied to travel behaviour? Does peer-to-peer influence affect the way in which people travel?



Social networks are growing and people are eager to share information about what they are doing on a regular basis. For the game to be successful within an organisation, the key peer-to-peer influencers will need to be identified from the outset. These individuals will be able to promote the game through their social networks and this should in turn encourage other people to participate.

3.5.6 The role of a MOBI Champion

A 'MOBI Champion' will need to be identified within each participating organisation and they will be responsible for co-ordinating the Challenge and acting as the point of contact for employees and the MOBI project partner.

The MOBI Champion will need to be someone who is charismatic and enthusiastic who can motivate people to participate and maintain an interest in the Challenge.

3.5.7 Engaging Employers

Organisations participating in the game receive the following:

- An introduction from a specialist in sustainable travel;
- Access to the online gaming environment and the helpdesk;
- Access to the travel data of their employees;
- Package of communication materials (posters, stickers, introductory emails, tips etc).

3.5.8 Engaging Employees

Efforts to engage employees and encourage individuals to participate in the game can be achieved using a variety of different techniques. Examples include publishing the game on organisation's websites, newsletters and facebook pages. Word of mouth promotion by employees is essential to encourage new players to sign up and compete against other teams, departments, offices, companies and cities.

3.5.9 Individual Players

Each employee will play the game as an 'individual' and will also be part of a 'team'. Points are collected based on the mode of transport that is used as well as an opportunity to collect other points from completing tasks and activities. The employee's points are ranked on an individual as well as team level.

Player must record their travel in an honest way to ensure the results are accurately recorded. If playing dishonestly, a player will be removed from the game. Penalties can be decided by the participating teams or at a higher level, by senior managers within the organisation.

3.5.10 Teams

Each team will be made up of 10-12 players. Employees can decide which team they will join (i.e. playing with colleagues in the same department, inter-department, inter-office etc). Team players



should motivate each other to travel sustainably and complete the ongoing tasks and activities to receive additional points.

A team name and e-mail address of all team members is required as individual players within each team also need to be registered.

3.5.11 The role of a Team Captain

Each team needs to identify a 'Team Captain' who can enthuse and motivate their fellow team mates.

The Captain will be responsible for ensuring each team member has registered. S/he will co-ordinate the team players and ensure they record their travel trips. S/he will also verify and validate the information their team provides to ensure the data is authentic. This will be achieved by 'approving' the weekly record sheets and filtering out any suspicious trips (e.g. walking 50km one way). The Captain will also act as the point of contact for the team and the MOBI Champion within the organisation.

Team Captains will be receive additional incentives to perform this role, which will be decided by individual organisations.

3.6 Step 5: Set the timescales for the challenge

Ideally organisations should play the game for a period of 6 months as this gives sufficient data to better understand employee travel behaviour. For those organisations who think 6 months may be too long, it is recommended that the game is played for a minimum of 3 months. Key dates to consider are:

- **Launch date** – this should take place 4 weeks before the start of the game. The aim of the launch is to raise awareness about the game and encourage employees to establish and register their teams. During this period leading up to the start of the game, the MOBI champion should prepare some promotional text for emails, posters and notices.
- **Start date** – 4 weeks after the launch date.
- **End date** – a minimum of 3 months after the start date.

3.7 Step 6: Raise awareness, publicise and promote

Once the initial preparations for the game are complete, the next step is to encourage employees to form teams and register their interest. To achieve this, the MOBI champion will need to start raising awareness about the game, publicising the benefits and promoting it within their organisation. This can be achieved by undertaking the following tasks:

- Produce a Marketing Plan
- Produce a Communications Plan
- Apply Crowdsourcing techniques



3.7.1 Marketing Plan (optional)

The MOBI Champion should produce a marketing plan to highlight the key activities that will be taken to publicise the game and encourage employees to participate.

Publicising the company and employee benefits of applying the F5T4 tool include:

- Enhanced image
- Providing substance to Corporate Social Responsibility goals
- Instrument for introducing new ways of working
- Employees will be encouraged to travel to work in a new way
- Gain insight into the mobility behaviour of employees
- Receive advice about mobility arrangements
- Improved accessibility
- Reduced local traffic congestion.
- Saves money.

3.7.2 Communications Plan

Ongoing communication with the participants is important to maintain their interest in the game. This can be achieved by regularly updating the pop-up messages that are displayed on an individual's dashboard.

The communications plan will need to include methods to publicise the employee benefits of playing the MOBI game.

- Players can do this by posting positive messages on the MOBI notice board.
- Teams can do this by telling other people about the game and encouraging them to participate.
- Organisations can do this by raising awareness about the game amongst their employees and informing other organisations about their achievements.

3.7.3 Apply Crowdsourcing Techniques

Crowd sourcing uses social software to create virtual crowds around shared interests. It taps into the power of the crowd by building online communities of passionate social customers and tap them for service, knowledge and ideas.

Such techniques can be applied to MOBI to raise awareness and interest in the game.

3.8 Step 7: Opportunities for wider synergies

Opportunities to play against other participating organisations and countries will be possible. It is not compulsory but some teams may wish to compare themselves against a wider pool of players.



3.8.1 Multi Country Competitions

MOBI is a European project and it is currently played in: Belgium, Bulgaria, Netherlands, Portugal, Romania and the UK. The trans-nationality nature of the project can result in players sharing information about mobility issues and solutions within their local areas and compare situations in other countries.

Individual teams can decide whether they would like to play against other European teams.

3.8.2 Links to Sustainable Urban Mobility Plans, transport, energy and environment policies

The MOBI Commuter Challenge game can be used as part of a toolkit of mobility management measures to encourage people to change their travel behaviour. The game and Sustainable Urban Mobility Plans share common aims and objectives. For example, the game can be used to promote a 20% reduction in solo car use.



4 Section 4: Playing the Game

A COPY OF THE MOBI RULES AND FREQUENTLY ASKED QUESTIONS IS AVAILABLE ON THE MOBI WEBSITE.

MOBI is a fun concept, but like all games, it still needs to have a set of 'rules' to ensure that all participants benefit from a level playing field.

4.1 General

The game is simple and intuitive and requires few rules to ensure travel behaviour data is recorded in the same way across the different teams, organisations, cities, regions and countries.

4.2 Objective of the Game

Participants are encouraged to change their travel behaviour by not using their car to travel to work at least one day per week. They do this by playing the game as an individual AND a team member.

Points are allocated to individual participants based on how they travel to work as well as other opportunities to gain additional points from completing ad hoc tasks (i.e. short questionnaire surveys, supporting other team members) throughout the game.

At various stages of the game there will be an opportunity for participants to convert their points into virtual prizes and rewards for their personalised MOBI avatar.

The results of the points per participant and team are ranked and available for other participants to view. Organisations and individual participants can decide what level of access they would like other people to have regarding the results – i.e. 'open' access to all participating organisations and individuals to enable benchmarking across Europe to take place.

Alternatively, organisations and individual participants may prefer 'closed' access and restrictions will be placed on their accounts to enable them to decide who can view their results (i.e. only those within their own organisation, neighbouring organisations within the same local area etc).

4.3 Timescales

Ideally, the MOBI game is played continuously over a 6 month period to encourage players to establish habitual travel behaviour patterns.

In some cases, participating organisations may decide to play the game for a much shorter period of time i.e. 1 week, a fortnight, 1 month, 6 weeks or a season etc. Those organisations who are participating as part of the EU funded MOBI project are required to play the game for 6 months.

Those organisations that are playing the game independently of the MOBI project should be encouraged to participate for a minimum of 3 months to ensure sufficient data is collected to enable a meaningful points table to be developed.



4.4 Organisations Registering to Play the Game

Participating organisations are encouraged to publicise the game amongst their employees to raise awareness and encourage individuals to take part.

Organisations can apply by registering on the following website: www.f5t4.eu or telephoning DTV Consultants: 00 31 (0) 76 513 6668.

Once the application has been received, organisations will be contacted by a member of the project team to arrange a meeting, discuss the game in more detail and suggestions on how to encourage their employees to participate.

4.5 Individuals Registering to Play the Game

Individual players will need to complete the following tasks as part of the registration process:

1. Form a Team:

Players are required to form themselves into small teams of 10-12 players.

2. Select a Team Captain:

A team captain needs to be identified and that person will be responsible for ensuring that all his/her team players have individually registered to play the game and completed the baseline questionnaire.

3. Complete the Baseline Questionnaire:

Individual players are required to complete an initial questionnaire asking for the following information to be supplied: first name, last name, address, and distance to work, email address, username and password.

This information is used only by the MOBI project team to communicate with the individual players about their progress and tips on how to gain more points.

Players are also required to register their usual commuter behaviour and travel modes.

PERSONALISED INFORMATION RELATING TO INDIVIDUAL PLAYERS IS TREATED IN STRICT CONFIDENCE AND NOT PROVIDED TO THIRD PARTY ORGANISATIONS.

4.6 Playing the Game

Participating in the game is simple; it only takes 1 minute a day to add information to the F5T4 tool. The more intelligently employees travel and work, the more points and prizes they can earn for themselves and their team. A pleasant side-effect of playing the game is that the employees and their teams will be contributing to the reduction of carbon gasses.

4.6.1 Recording Journeys

Participating players are required to record their journey to and from work by:



- Ticking boxes stating which mode(s) of transport they used to travel to and from work (i.e. recording all legs of a journey) and the estimated distance for each mode; OR
- Ticking a box stating they were working from home; OR
- Ticking a box stating they were not at work on a particular day.

If a player is not going straight to their place of work, but going somewhere else to complete a work related task, s/he should record the trip based on the mode they used and the destination they first went to.

Recording business trips is optional. The MOBI project partner will discuss this option with the participating organisations to establish whether it will feature as part of the game.

If a player is absent from work (e.g. due to a holiday or illness), there is a box titled “day off” that can be ticked.

Players have a maximum of 2 weeks to record their journeys to work. If they do not submit their travel information, they will receive zero points.

4.7 Points

Players earn points according to the mode of transport used or trip avoided (i.e. working from home). They can also earn additional points by completing various tasks or helping other team players.

4.7.1 Earning Points

Players can earn points by:

- Completing the baseline questionnaire when registering to play the game.

Players can earn additional points by:

- Completing ‘Pop-Up’ Tasks;
- Being a ‘buddy’ for another player (i.e. encouraging other players to use sustainable modes of transport by accompanying them on their journey).

4.7.2 Calculating Points

Points for part-time/full-time employees are calculated as an average of the number of km travelled per mode. The points are divided for the number of days a player works. It is possible to earn a maximum of 10 points per day and 50 points per week (assuming full-time employment).

Each time a player travels to work s/he will receive points for each sustainable mode of transport used:

- Walk – 10 points
- Cycle - 10 points
- Work from home - 10 points
- Bus – 8 points



- Train, Tram, Metro – 8 points
- Moped / Scooter – 6 points
- Car (2 or more people sharing) - 4 points
- Avoid travelling during rush hour – 4 points
- Motorcycle - 2 points
- Car (on own) – 0 points

If a player leaves the game before the end, his/her points remain.

4.7.3 Converting points into prizes

Players are able to convert their points into virtual prizes at various points during the game, which can be used to reward the personalised Avatar in the form of presents, clothing, gadgets etc.

Depending on the arrangement that has been made with a participating employer, other ‘real’ prizes may also be available.

4.7.4 Individual and Team Ranking

Points are calculated for each individual player and participating team.

Players can see how well they and their team are doing in comparison to other individuals by looking at the ‘Ranking’ table on the Ranking section of the F5T4 website. This section also lists the ‘Top 10 Players’, ‘Top 10 Teams’ and ‘Record Holders’ for each type of activity.



4.8 Rewards

Employees should be incentivised through ‘Rewards’. Information about “What can I win?” should be included in the marketing to employees to keep them hooked. Even though standard “prizes” like MOBI e-awards, digital avatar (see below) gadgets and top rankings will be identical in all participating organisations, additional prizes will vary, as this depends on what the individual organisation wants to offer its employees (e.g. a bicycle, charity donation) and which local stakeholders have agreed to provide prizes / vouchers.

The MOBI project partner can help the MOBI Champion to approach local stakeholders, but the main responsibility for this lies with the participating organisation. When an organisation participates, the MOBI project partner will provide a list of examples of rewards that companies could provide and a list of rewards the MOBI partner can offer (e.g. templates for a MOBI t-shirt or mug).

4.9 Personalised MOBI Avatar

Each game player has his/her own personal ‘MOBI’ avatar that can motivate individuals and provide top tips and win prizes. The avatar acts as a coach to incentivise and encourage people to change their travel behaviour and use a car at least one day less per week.



Players can personalise their MOBI character by using points they have earned from travelling sustainably or completing other tasks (i.e. completing surveys, offering a bike or public transport buddy role to another member of the team etc) and exchanging them for virtual prizes.

The personalised MOBI characters can deliver messages to the players about a range of different subjects, including: information about any events that may be taking place, advice and top tips on how to stay motivated, requests for players to complete questionnaire surveys in return for additional points, and general motivational messages.

4.10 MOBI Data Output

Employees are required to enter their travel to work information into the MOBI online website or mobile phone application. The resulting data outputs include: modal share data, distances travelled to work, carbon savings, fuel savings, calories burned, number of days spent working at home etc.

4.11 Data Analysis

- Framework for the interpretation of data,
- Sampling and database
- Use of data for during the game to motivate the participants
- Use of data for intermediate and post evaluation

4.12 MOBI Messages and Pop-Up Tasks

The F5T4 website includes a 'Player's Overview Dashboard' that summarises the player's history, results, ranking and achievements. The Dashboard also includes a message box offering motivational comments to the player and tips on how to progress and win more points.

The Dashboard also features 'Pop-Up Tasks' – requests for players to do additional tasks in return for extra points for themselves and their teams. Pop-Up Tasks can include, and not limited to, surveys asking for more information about how the players are travelling or questionnaires relating to attitudes towards different modes of transport.

Depending on the arrangements that have been made with the participating organisation, it may be possible for employers to issue their own messages and pop-up surveys.

4.13 Rules of the Game

Like all games, the MOBI commuter challenge has a number of rules to ensure there is a level playing field.

4.13.1 Rules for Participating Organisations

- **Rule 1:** Identify a MOBI Champion who will be the point of contact between the MOBI project partner, the organisation and the employees.
- **Rule 2:** Organisations are asked to agree to the MOBI terms and conditions.



- **Rule 3:** Organisations are asked to provide the MOBI project team with consent that the data collected as part of this project can be anonymised to enable further academic research to be undertaken.
- **Rule 4:** Organisations are not allowed to request a financial payment from their employees to participate in the game.

4.13.2 Rules for Teams

- **Rule 1:** Each team must have a minimum of 10 and no more than 12 players.
- **Rule 2:** Participants within a team must select a 'Team Captain' who will act on behalf of the participants and 'validate' their travel to work information.

4.13.3 Rules for Employees

- **Rule 1:** Enjoy the game and have fun.
- **Rule 2:** The game is based on 'honesty' and 'trust' (employees are responsible for recording their own travel to work information accurately).
- **Rule 3:** Participants need to register their interest in playing the game and sign the Privacy Terms and Conditions. Once the individuals have registered, their team captain will then need to complete and validate the information about their respective team.
- **Rule 4:** Participants are required to complete a travel diary (either online or via a mobile phone application) answering the following questions:
 - Distance from home to work?
 - Number of days working from home each week (if applicable)?
 - How they travelled to work each day (this can be recorded weekly)?
 - If they switched from using a car to another mode, what did they use?
- **Rule 5:** Employees are asked to agree to the MOBI terms and conditions.
- **Rule 6:** Employees are asked to provide the MOBI project team with consent that the data collected as part of this project can be anonymised to enable further academic research to be undertaken.

4.14 Privacy issues

The MOBI website, F5T4 tool and mobile phone application all include a set of Terms and Conditions explaining how information and data about organisations and employees will be used.

Those who continue to take part in the game will need to tick the Terms and Conditions box as a way of demonstrating their consent and acceptance. If they do not agree with the terms and disclaimers, they will be asked to leave the game.

All personal information entered upon registration will solely be used within the MOBI project. Anonymised data will be provided to partnering universities who are carrying out further research on behalf of the MOBI project team.



Personal information will not be sold or distributed to any third party. Individual's personal information will only be accessed if participants are abusing the rules and terms and conditions of the game or there is an issue with spammers.

The purpose of the Terms and Conditions agreement is to ensure the MOBI tools are compliant with relevant data protection laws within each of the participating countries.



5 Section 5: Case study examples

The MOBI game has been tested by a number of different organisations to identify lessons learned and areas for improvement. Below is a short overview of the organisations that took part in the tests and their key findings.

5.1 DTV Consultants & Organiq New Media (NL)

50 players within these two organisations played the game for a period of 4 months. The results showed 18.5% car use during rush hour periods. A need to improve their behaviour in relation to business travel was also identified during the game.

5.2 Mobiel 21 (BE)

24 players participated in the game during a 6 month period. The results showed 19% of all trips were made during rush hour periods.

5.3 Erasmus University (NL)

38 students and staff participated in the game during a period of 4 months. The results showed 21% of all trips were made during rush hour periods.

5.4 Verkeersonderneming (NL)

29 employees participated in the game during a period of 4 months. The results showed 29% of all trips were made during rush hour periods.

5.5 Rotterdam School of Management (NL)

University staff played the game for 3 months and the results showed they were able to reduce their CO2 emissions by more than 328 tonnes and burned more than 122,000 calories by changing the way they travelled to and from work.



6 ANNEX 1: MOBI Research

In 2013, students from Amsterdam University were asked to examine the F5T4 tools and provide the MOBI project team with research into various aspects of the game.

6.1 Research into Motivational Factors

Students³ carried out research into perceptions of liking and willingness to play the game based on start screen exposure only (and not the full game). The following motivational factors were examined in more detail:

6.1.1 Environmental Concerns

- The tools were manipulated by adding different techniques to visualise the CO2 measures and these ranged from growing trees, changing badges to “leaf points” and including a graph of CO2 saved to the main start screen.
- The students found those participants who saw this environmental version of the game were more willing to play the game than those who saw the control version.
- Recommendation: aim the marketing campaign towards people/companies who are already concerned for the environment and add more information about environmental factors (i.e. CO2 savings).

6.1.2 Competence Concerns

- The tools were manipulated by changing the level of the player, and showing points, badges and scores on the start screen.
- The students found those participants with a higher basic need satisfaction of competence liked the game better and reported a higher perception of satisfied competence need.
- Recommendation: keep existing competence motivations (points, scores, badges) as they are.

6.1.3 Relatedness Concerns

- The tools were manipulated by moving the leader board and team communication to prominent positions on the screen.
- The students found women had a higher perception of satisfied relatedness needs via the game than men.
- Recommendation: primarily aim the development and marketing of relatedness factors (team building) at women.

³ Students involved: Friederike van Emden, Bram Schothorst, Misha Naumovski and Jim van den Helder

6.1.4 Autonomy Concerns

- The tools were manipulated by adding options to click on different transport modes at the top of the start screen, showing how often people chose each option, and removing the leader board and badges from the top of the screen.
- The students found more options to change the goals leads to a higher perception of autonomy in the game. This leads to more willingness to play and a higher liking of the game.
- Recommendation: add customised options to help people feel they have choices in game play.



7 ANNEX 2: Frequently Asked Questions

7.1 Themes

This section outlines the common questions that are often asked by MOBI players. They are subdivided into the following thematic headings:

- My User Account
- Team Information
- Calculating Points
- Recording a Trip
- Business Travel Trips
- Correcting Travel Data Entry Mistakes
- Targets
- Reaching Different Levels
- League Tables

Please contact the helpdesk if you have any further questions.

7.1.1 My User Account

Question: “How do I login to my account?”

Answer: Go to the login window and use your personal username and password to gain access.

Question: “I have a problem with my user account. What should I do?”

Answer: If you have a problem with your account, and you cannot find the answer on the ‘Help’ page, please email the helpdesk. Your request will be processed within 48 hours.

Question: “I have forgotten my password. What should I do?”

Answer: If you have forgotten your original password, you can apply for a new one by clicking on the ‘username and/or password’ button on the login page. You will receive a message that you can re-create your password.

7.1.2 Team Information

Question: “How can my team send a message?”

Answer: It is possible for team members to send messages to each other. On the homepage, you will find a message window. By entering your message in this box you can communicate with other team players.

7.1.3 Calculating Points

Question: “How are the points calculated?”



Answer: Points are calculated on an average of the distance travelled by the mode of transport used, or trips avoided (e.g. working from home) per day. If you travel by car, on your own, in the rush hour you will receive 0 points. If you travel by car with someone else, or travel during non-peak hours, you will earn 2 points. If you use public transport, you will earn 8 points, moped/scooter earns 6 points and walking, cycling or working from home earn the maximum of 10 points. Points are calculated on a daily basis and the maximum that can be earned is 10 points.

Example – distance travelled from home to work is 10km. If I cycle (10 points) one way and catch the train home (8 points) I will earn 9 points for that day. $10\text{km}/20\text{km} * 10 + 10\text{km}/20\text{km} * 8 = 9$ points.

Your individual points are displayed on your summary page.

Question: “How do I earn extra points?”

Answer: Each time you progress to a new level, or complete a task set by the MOBI avatar, you will earn more points.

7.1.4 Recording a Trip

Question: “How often do I record my trips?”

Answer: You can enter information about your trips on a daily or weekly basis. Remember to click the ‘enter’ button after you have recorded your trip.

Question: “How do I record information about trips I have taken during previous weeks?”

Answer: To enter data about previous weeks, click on the arrows at the top of the trip data form to find the relevant week, enter the data and then press “send”.

7.1.5 Business Travel Trips

Question: “Do I need to record trips that I take during the working day?”

Answer: If you are making a journey from home to another work-related location that is not your usual place of work – yes, you must record the trip. After that trip, if you then travel to another location, you do not need to record the data about the second trip. Similarly, if you make a work-related trip to another location on your way home, you do not need to record that trip. You will only need to record the journey from the last work-related location to your home.

7.1.6 Correcting Travel Data Entry Mistakes

Question: “I made a mistake when I filled out my weekly trip behaviour form. How can I change it?”

Answer: If your team manager has not yet approved the entry for that week, you can explain to him/her that you need to make a change. You still have time to enter your travel behaviour for that week. If you are a team manager and you need to make a change, please contact the helpdesk.

Question: “I accidentally submitted my form before completing it in full. What should I do?”



Answer: It is possible to complete the form on a daily basis – press the “send” button and then “save”. If you click on the “send” button twice, your form will be sent to the team captain. Contact the team captain and ask him/her not to approve the form until you have made the relevant changes. If you are a team captain and have accidentally submitted your form, contact the helpdesk.

7.1.7 Targets

Question: “What target do I need to reach?”

Answer: The aim of the game is to change the way you travel to work for a minimum of 1 day per week. Each player has a target of 20%.

7.1.8 Reaching Different Levels

Question: “How do I move up the levels?”

Answer: Once you have earned 50 points you can progress to a new level.

Question: “How can I earn more awards?”

Answer: Awards are based on the number of days that you do not travel to work by car on your own. You can earn a bronze, silver or gold award.

- Bronze – 5 times using a different mode to the car;
- Silver – 25 times using a different mode to the car;
- Gold – 50 times using a different mode to the car.

7.1.9 League Tables

Question: “Top 5 participants and teams?”

Answer: Player scores are ranked in a league table. Rankings are calculated using an average of the weekly scores per game week. The top five players and teams are listed. In your individual summary sheet you can see how you are doing compared to the league. Your scores are calculated using a weekly average (i.e. a maximum average of 10 points) and added to the number of weeks you have played. The number of points in the rankings is always lower than your individual total points.

