![MOBI – PROMOTING SMART MOBILITY TO EMPLOYEES]

D4.4 – Guidelines for implementing From5To4

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MOBI

**PROMOTING
SMART
MOBILITY
TO
EMPLOYEES**

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About the MOBI project

The MOBI project ('ProMOting Smart MoBIlity to Employees') contributes to the EU's energy policy goals by encouraging employers and their employees to use energy efficient and sustainable transport modes for their commute and business travel journeys. This is to be achieved through the implementation of the award winning proven sustainable mobility online game (F5T4) originating from the Netherlands.

The specific project objectives are: 1) to inform employees of the benefits of using sustainable transport modes when making their commute and business travel trips; 2) to disseminate information to employees about the benefits of using sustainable modes through the 'F5T4' online game; 3) to encourage employees to use sustainable transport modes through the implementation of a smart mobility competition (i.e. a 'commuter challenge'); 4) to encourage local authorities, public transport providers and organisations providing electric vehicles (cars, scooters and bikes) to champion the benefits of sustainable travel, hence ensuring the project's legacy; and 5) to make recommendations to policy makers about further actions to increase energy efficiency in commuter travel, based on the outcomes of this project.

The game has been applied in Belgium, Bulgaria, the Netherlands, Portugal, Romania and UK. Over 30 organisations have joined the game, with over 9000 players registering 75000 daily trips.

Aim of this document

The aim of this document is to provide mobility management implementers with practical information about From5To4, how it works, how it can support a wider travel behaviour change campaign and culture, provide advice on how to implement the game within organisations and how to plan supporting awareness raising and campaign launch events.

It begins by outlining 'Gamification' and the various motivational factors to maintain players involvement. It goes on to explain the F5T4 Commuter Challenge methodology, followed by a description of how to play the game and its rules. Finally, it outlines the strenghts of the game and shows the best contexts to implement the game and how to exploit it.

Section 1: Introduction to From5To4

What is From5To4?

From5To4 (F5T4) is a commuter challenge tool to encourage travel behaviour change. Its overall aim is to reduce traffic by encouraging employees to travel more smartly (e.g. walking, cycling, public transport, carpooling and working from home).

F5T4 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.

Who is From5To4 aimed at?

Organisations that have environmental and social concerns and want to improve their image; organisations that experience accessibility problems and want to boost a set of mobility measures; organisations that want to pursue sustainable management and improve the health and satisfaction of their employees by making 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.

What does From5To4 mean?

What if, instead of using a car 5 days per week, you used it only 4 days per week? What if you chose a sustainable mode one day per week? From 5 unsustainable days to 4 unsustainable days, a small effort with significant consequences: a reduction of overall traffic of 20%. And everyone can play, if you already travel (partly) sustainable the tool adjust automatically and you earn points for you and your team!

How does it work?

Once an organisation decides to play, its employees must form teams that will play against each other.

Employees must then register their daily commuting trips on the game's website, indicating the distance and the mode used in each leg of the trip. The more sustainibly the employees travel, the higher will be their performance.

Players are incentivised through tips, rewards and rankings. They will get a chance to improve their travel experiences, contribute to a better environment and have fun with their coworkers, reinforcing team spirit.

Section 2: What is Gamification?

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 innanimate 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 example, in 2010 Starbucks gave Foursquare badges to customers who visited multiple locations and offered discounts.

These tools and techniques may be applied to the transport sector to encourage changes in travel behaviour 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. From5To4 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 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.

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:

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.

Autonomy Need

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

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.

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.

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[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.

In addition to the above, other types of psychological motivational factors[2] include:

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 thought they may not actually be as / more attractive an option).

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.

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 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.

Random Reward Schedules

- Whilst fixed rewards are a motivational factor, greater participation can be secured from a more random reward schedule. The example if 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:

Environmental and Economic Concerns

- Information provided about an individual's contribution to CO_2 or fuel savings they may realise from changing their travel behaviour may encourage players to reconsider how they travel to work.

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

Section 3: Implementing From5to4

Overview of the Methodology

From5To4 can be implemented in any workplace. A simple '5 Step' methodology can be followed to ensure the challenge is designed and implemented in a similar way. The 5 steps are:

STEP 1: Raise awareness about From5To4

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STEP 2: Identify opportunities for wider synergies

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STEP 3: Target an organisation

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STEP 4: Understand the public (employees)

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STEP 5: Develop the game action plan

Step 1: Raise awareness about From5To4

In order to implement and promote From5To4 in a new region, 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.
- 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.).
- Invite organizations which present cases of success to present their case at relevant events (e.g. ANA Aeroportos from Portugal presented their case in three different events).

Step 2: Identify opportunities for wider synergies

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

From5To4 can be used as part of a toolkit of mobility management measures to encourage people to change their travel behaviour. The game shares common objectives with Sustainable Urban Mobility Plans (SUMPs) and other travel demand measures, and may positively reinforce each other's performance.

Local authorities (such as Spijkenisse in the Netherlands; Sofia in Bulgaria; Lisbon and Braga, in Portugal; Bristita and Brasov in Romania; Oxford and Nottingham in the UK) used the game as a good opportunity to raise awareness of mobility issues, set a good example and improve the quality of life in their local area.

Some companies have used the game to get to know their employees' mobility habits so that they could further develop their mobility plan. Others used the game to boost other mobility measures taken by the company, such as setting a carpooling scheme.

Support from local key stakeholders

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.

- Sustainable energy and mobility agencies.

- Public transport operators, car share providers and carpooling websites.

- 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.

- Air quality champions and other campaign groups

Rewards and incentives are really important. People respond well if their positive behaviour is formally recognised. Rewards can range from virtual prizes, such as badges, 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.

Contacting and securing 'taster' incentives from local public transport operators, car club and bike hire organisations in advance is likely to encourage more companies to participate in the game. Other examples could include:

- A month's free membership at a local gym / museum / art gallery;

- Vouchers to a variety of different shops / restaurants / online sites.

A wider variety of rewards and incentives is likely to result in more people participating in the game.

Multi Country and Organization Information and Competitions

From5To4 is currently played in Belgium, Bulgaria, the 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. These experiences can also be shared with players from other countries.

Step 3: Target an organization

Selecting an organisation

When selecting a potential organisation to participate in the game, it is important to consider the following characteristics: size, location, type of organisation, Corporate Social Responsibility ethos, proximity to the final consumer, and whether they are developing, or have introduced, a mobility plan.

Some types of organisations are more likely to adopt From5to4 than others. These typically include medium to large sized organisations, located next to strong public transport networks, consumer-oriented, with some connection to environmental issues, and in the late stages of mobility planning. However, this targeting campaign should not be limited to these 'obvious' organisations, because: 1) Some of them are already involved in similar campaigns and do not wish to enter this new one; 2) Sometimes unexpected organisations surprise with their eagerness to play the game. Section 6 explains in further detail which organisations to target and a suggested way forward.

Engaging an organisation (what is the hook to get them interested?)

Identifying the hook to engage the organisation is essential. Once their initial need has been identified, additional communications and engagement messages can be designed around it. The main motivations will vary wildly according to the type of organisation and the people responsible for communications and decision making. The main advantages to an organisation of From5To4 include:

- Retrieving employee mobility data

- Boosting other measures to promote sustainable mobility

- Reducing parking scarcity/costs and other mobility related costs

- Increasing the satisfaction, health and productivity of employees
- Promoting social interactions amongst employees
- Improving the corporate image and setting a good example for others to follow
- Developing the social responsibility program
- Commercial or research interests

The role of a From5To4 Champion

A 'From5To4 Champion' will need to be identified within each participating organisation and they will be responsible for co-ordinating the game and acting as the point of contact for employees and the From5To4 promoter.

The From5To4Champion will need to be someone who is charismatic and enthusiastic who can motivate people to participate and maintain their interest in the game.

Step 4: Understand the public (employees)

The From5To4Champion should produce a communications, engagement and marketing plan to highlight the key activities that will be taken to publicise the game and encourage employees to participate.

Reaching participants

To reach employees and inform them about the game, several strategies may be followed. Examples include publishing the game on the organisation's website, 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.

Social Marketing and Segmentation

Social marketing 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. The EU funded SEGMENT project (www.segmentproject.eu) applies segmented marketing techniques to reach target audiences.

Engaging employees

Highlighting the personal benefits from playing the game is essential for any communications materials aimed at employees. Since different people have different motivations, it is important to segment the audience accordingly. Examples of key benefits could include:

- Contribute to improve the environment and the quality of life of the city/region
- Improve health and fitness
- Save money
- Set an example for others to follow
- Contribute to the organisation's goals
- Having fun and socialising with colleagues in a different context

The organisation has the option to make the game mandatory. Whilst most organisations do not mandate the participation of the game amongst their employees, there were a few examples where this did happen and the results were still positive.

Step 5: Develop the game action plan

Set the timescale for the game

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

- Launch date – this should take place four 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 organisers should prepare some promotional text for emails, posters and notices.

- Start date: four weeks after the launch date.

- End date: minimum of three months after the start.

Choose the available modes

From5To4 has 12 possible modes for the commuting trips: walking; cycling; work from home; bus; tram or metro; train; ferry; scooter or moped; motorcycle; carpooling; car; rush hour avoidance. The organisation might not be interested in some modes (such as working from home or rush hour avoidance), or the alternatives might not be available in the geographical area (such as ferries). Before the game starts, the organisation must select which modes will be available as an option for employees.

Define awards and complementary actions

Employees will be more motivated if they know in advance the awards being given at the end of the game. The organisation should decide which awards are to be given to employees, which might be done in cooperation with the From5To4 promoter or other local stakeholders. In addition to the final awards, some complementary actions may be included, such as giving breakfast to cyclists or other equivalent measures that help increase the level of interest in the game.

Form Teams

Each employee will play the game as an 'individual' and will also be part of a 'team'. Each team will be made up of 5-12 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.

The teams may be formed by the F5T4 promoter, but experience has shown that the teams formed by the players themselves achieve better results.

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

Choose Team Captains

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 accurate. This will be achieved by approving the weekly record sheets and filtering out any suspicious trips (e.g. walking 50km). The Captain will also be the point of contact for the team and the From5To4 Champion.

Team Captains may receive additional incentives to perform this role, chosen by the organisation.

Set a communication strategy

Ongoing communication with the participants is important to maintain their interest in the game. This can be communicated either via the game itself (e.g. pop-up messages displayed on an individual's dashboard; messages posted by players on the From5To4 noticeboard), or via other media (e.g. e-mails, posters, events, complimentary actions).

Other strategies include methods to publicise the employee benefits of playing the From5To4 game.

- Players can do this by posting positive messages on the From5To4 noticeboard.

- Teams can do this by telling others 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.

Start the game

Enjoy the game and have fun!

Section 4: Playing the Game

FROM5TO4 RULES AND FREQUENTLY ASKED QUESTIONS ARE AVAILABLE AT THE MOBI WEBSITE.

From5To4 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.

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.

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. The game also calculates progress of the individual: in comparison to the baseline week, how much more sustainable is the player travelling?

The results of the points and progress per participant and team are ranked and available for other participants to view.

Additionally, the game provides info to players on the calories they have burnt and the CO_2 emissions they have saved.

Timescales

From5To4 is to be played continuously over a period of three to six months, 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. one week, a fortnight, one month, six weeks or a season etc.

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 by emailing the helpdesk (info@van5naar4.nl).

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 develop a strategy to engage their employees.

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 5-12 players. Ideally all teams should have the same number of 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: name, distance to work, email address, username and password.

   Afterwards, players are required to describe their typical commuting week: distances and modes used on each working day. This profile will be the basis for the progress calculations.

   Finally, users are asked to personalise their MOBI avatar.

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

Playing the Game

Participating in the game is simple; it only takes one minute a day to add information to the From5To4 tool. The more intelligently employees travel and work, the more points and prizes they can earn for themselves and their team. One side-effect of playing the game is that the employees and their teams will be contributing to the reduction of carbon emissions.

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 titled "day off" stating they were not at work on a particular day (e.g. due to a holiday or illness).

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.

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

The game is based on 'honesty' and 'trust' (employees are responsible for recording their own travel to work information accurately), so enjoy the game and have fun.

Points

Players earn points according to the mode of transport used or trip avoided (i.e. working from home).

Calculating Points

Points for part-time/full-time employees are calculated as an average of the number of km travelled per mode in each day. Each time a player travels to work s/he will receive points for each sustainable mode of transport used. The availability and value of each mode are set according to the request of the organisation playing the game. Bellow you can find a suggestion for the value of each mode:

- Walk – 20 points
- Cycle – 20 points
- Work from home – 20 points
- Public transport (bus, tram, metro, train, ferry) – 16 points
- Moped / Scooter – 12 points
- Carpooling - 8 points
- Avoid travelling during rush hour – 8 points (if applicable)
- Motorcycle - 4 points
- Car (single occupant) – 0 points

Another possible approach is to give 20 points to all modes except car and possibly motorcycle, in order to not penalise players who want to travel more sustainably but that have no conditions to choose the higher

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options. This point distribution was followed in the majority of the games played so far.

Individual and Team Ranking

Points and progress are calculated for each individual player and participating team.

Players can see how well they and their team is doing in comparison to other individuals by looking at the 'Ranking' table on the ranking section of the From5To4 website, for both points and progress. This section also lists the 'Top 10 Players', 'Top 10 Teams' and 'Record Holders' for each type of activity.

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 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 From5To4 manager can help the From5To4 Champion to approach local stakeholders, or the participating organisation can lead this process. When an organisation participates, the F5T4 tool will provide a list of examples of rewards that companies could provide and other materials (e.g. templates for a MOBI t-shirt or mug).

Organisations can get creative: Floordam, in Belgium, offered breakfast to employees who biked to work.

Personalised MOBI Avatar

Each game player has his/her own personal 'MOBI' avatar that can be customised. 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.

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.

From5To4 Messages and Pop-Up Tasks

The From5To4 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, such as answering 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.

From5To4 Data Output

Employees are required to enter their travel to work information into the From5To4 online website. 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. Additional analyses in subcategories are possible based on modal split per age group or home-work distance for example.

Privacy issues

The website and From5To4 tool include a set of Terms and Conditions explaining how information and data about organisations and employees will be used.

All personal information entered upon registration is stored on private owned and protected servers and will solely be used within this project. Anonymised data may be provided to partnering universities for research purposes.

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.

Section 5: Does From5To4 really work?

It does indeed! From5To4 has shown positive results everywhere it has been applied.

The game provides a fun way to induce behaviour change, where the team dynamics works as an important motivator, providing a context for social interactions that might not occur otherwise. Adopting the game helps companies improving their internal and external image. Since the game has tangible and observable results, it can work as a powerful tool for external communication. It also delivers the direct and indirect benefits to the organisation that come from the reduction of car trips: lower parking space requirements and costs, more healthy employees and lower mobility related costs including congestion. From5To4 can also be used to obtain information on the employees' mobility patterns and help identify shortcomings and opportunities for improvement. From5To4 may be used to help develop or complement a company's mobility plan, both through additional information and by capitalizing on other implemented measures.

Over 9000 employees across 30 organisations around Europe have played the game, filling in nearly 75000 trips. The game is successful in keeping the players engaged, with over 64% of them filling in more than 80% of the days. Each player registered their trips 4.4 days/week.

The main motives for employees to join the game were the

REGISTERED	100%
ENTERED THE GAME	99%
FILLED IN TRIPS	94%
> 50% DAYS FILLED IN	76%
> 80% DAYS FILLED IN	64%

will to improve the environment and to improve their health and fitness, as well as contributing to the goals of the organisation. The main aspects that kept them

motivated were the interaction with colleagues, the challenge of self-improvement and the friendly competition between teams. Overall players were quite satisfied with the game, with 91% of them stating they would recommend the challenge to others.

In terms of behaviour change the results have been incredibly positive: the **usage of sustainable modes has increased from 58% to 80%**, actually exceeding the 20% increase goal.
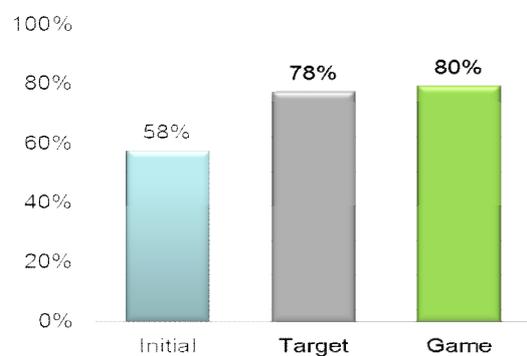
About 57% of the players significantly increased the utilisation of a sustainable form of mobility.

Distance wise, the modal share of private car reduced from 65% to 42%, and motorcycle from 5% to 1%. The modal option with a higher increase was carpooling, going from 5% to 16%. This mode, despite not having the same level of benefits as cycling or walking, effectively reduces the number of cars circulating, while providing an opportunity to socialise with the co-workers.

The use of public transport also increased significantly, from 19% to 28%. Finally, walking and cycling increased, respectively, from 2% and 4% to 4% and 8%, representing an **increase of 24% of calories burnt**.

On average, the emissions of CO_2 and energy consumption have reduced 27%, representing **total savings of 14.7 tons of CO_2 and 5.5 toe**

From5To4 also proved to have effects even beyond the duration of the game, since it contributed to change the players' opinion about the various modes of transport

throughout the game.

Evolution of opinion
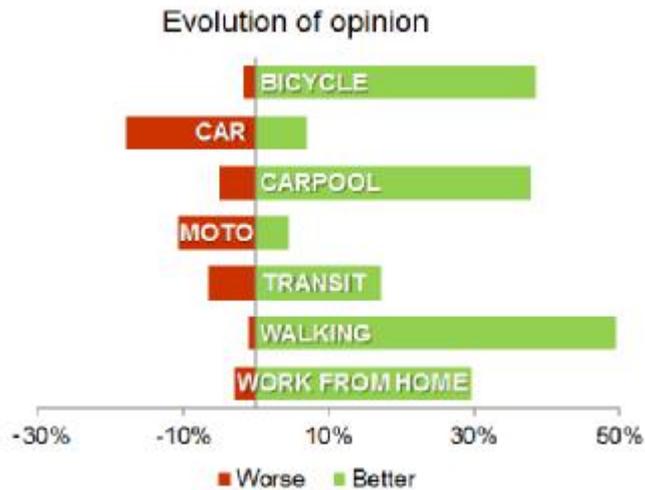
In the questionnaire sent to 250 players over one month after the end of the game show, **39% of the respondents stated that their opinion on cycling had improved**, and 43% stated they were more likely to use this mode in the future.

49% of respondents said their opinion on walking had improved and were more likely to use this mode in the future. Carpooling also became more highly regarded, with 38% of the respondents improving their opinion and 28% stating they would use it in the future. Contrary to this tendency, the opinion on car got worse for 18% of the respondents.

The biggest challenge From5To4 faces is engaging organisations to play: only about 10% of the contacted organisations decided to follow through. These numbers can be improved by targeting the right companies and suiting the approach to their goals and needs. The next section details how to conduct this process.

MORE INFORMATION ON FROM5TO4 RESULTS CAN BE FOUND IN THE DELIVERABLE 4.2 FINAL FEEDBACK REPORT, AVAILABLE ON THE MOBI WEBSITE.

Section 6: Analyse your context – how to sell From5To4 in different situations?

The experience has shown that From5To4 works in several contexts, but each organisation has different motivations to play the game. When engaging a new organisation, it is necessary to understand their needs and external constraints and develop a bespoke approach. Below are some of the most relevant factors that influence the decision of entering the game.

Type of organisation

For-profit companies are especially interested in cutting costs and increasing employee satisfaction and productivity.

Consumer focused companies are concerned with public image and social responsibility.

Local authorities are interested in setting a good example. They should be encouraged to host public events or other forms of divulgation.

NGO and environmental/transport oriented companies are motivated by the public image and environmental benefits.

Universities and other learning institutes are interested in getting results to support research in different areas like parking optimisation, gaming, economics, behaviour, ict etc. During the project, nine students graduated and two scientific papers have been aproved.

Stage of smart mobility promotion

Companies may be at different stages of having a mobility plan. Depending on that stage, the role a product like From5To4 may differ significantly.

0. *No plan at all* – From5To4 may work as a wakeup call, creating awareness of the need to have a moblity plan and setting the path for the following stages of the plan.

1. *Diagnosis* – By making employees registering their trips and being more aware of their mobility choices, From5To4 can work as a powerful monitoring and diagnosis tool.

2. *Actions to improve mobility* – If the company has recently taken actions to improve mobility (such as installing shower facilities or creating a carpooling scheme), From5To4 can be used to boost those changes.

3. *Behaviour change* – Once a plan is fully implemented, it is expectable to observe some behaviour change from the employees. From5To4 can complement that plan, since the social component of the game will work as an extra motivation to adopt of keep following sustainable behaviour.

Specific needs of the organisation

Getting information on employees mobility patterns: From5To4 can help to identify and monitor the commuting habits of employees. In regions where companies are not required to have a mobility plan, there will be less interest in this feature.

Increasing the health and satisfaction of employees: From5To4 provides a sense of satisfaction for contributing for the environment, helps reducing personal costs, boosts social interactions and improves the health of those who choose to walk and cycle, having the potential to reduce the rate of absenteeism up to 50%[3].

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[3] SustraMM, Costs and Benefits of Cycling, by Throstein Belter, Maike von Harten, Sandra Sorof (TU Dresden), 2012.
http://enercitee.eu/files/dokumente/Subprojects/SUST RAMM/SustraMM_Costs_and_benefits_of_cycling.pdf

Reducing costs: mobility bugdgets, parking, health costs, surveying and monitoring costs, planning

Improving internal image and communication: From5To4 can help developing the culture of the organisation, working as a catalyst for social interactions and the establishment of a cooperative atmosphere. The game boosts hallway interactions that not only keep the players motivated as they enable the exchange of ideas that might be advantageous to the organisation.

Improving external image: Engaging in From5To4 shows in itself a concern over social and environmental issues. Additionally, the game's materials, recognizable mascot, European background and concrete results can be powerful elements for an external (and internal) communication campaign.

Setting the example: if the organisation is interested in promoting sustainable behaviour beyond their scope, From5To4 can work as a promotion tool. Especially suitable for local authorities or NGO.

Transport and accessibility supply

Organisations with good public transport accesses are more willing to enter the game, but the game has had good results with companies that are not in that situation. From5To4 should be seen as a opportunity to create mechanisms that allow employees to make smarter mobility choices.

For companies that already have shuttles or a similar solution, F5T4 might complement this mechanism (for example by encouraging employees that do not yet choose this option, or by promoting sustainable modes to access the shuttle's departing point).

Cultural aspects

The cultural context has influence over the existence of mobility plans, the attitude over environmental issues, the value given to the external image of the company. In green minded regions, companies will be more willing to join From5To4. If there are other similar campaigns, greater emphasis should be given to the distinctive aspects of From5To4.

In regions with a weak cycling culture, it might be hard to convince employees to try this mode, which is why it is important to show that From5To4 also promotes public transport and even carpooling, thus providing everyone a reasonable way to improve behaviour.

Enthusiasm and charisma of responsible staff

While the aspects of location, type of organisation, needs and values of the company play an important role in joining From5To4 and the success of the game, ultimately **one of the main decisive factors** is the enthusiasm and charisma of the person or team responsible for the decision.

To minimise the effect of having unenthusiastic ambassadors, it is recommended that more than one person is assignd the role of ambassador. When dealing with ambassadors that are not green minded, greater emphasis should be given to the objective results and potential company gains (i.e. cost reduction, satisfaction increase, healthier employees) rather than the social and environmental benefits of From5To4.

MORE INFORMATION ON HOW TO ENGAGE COMPANIES AND CASE EXAMPLES CAN BE FOUND IN MOBI DELIVERABLE 4.3 - POTENTIAL, CONTEXTS AND APPROACHES FOR APPLICATION OF THE FROM5TO4 GAME, AVAILABLE AT THE MOBI WEBSITE.

Section 7: Factors of success

From5To4 has been played by different organisations, in different contexts, with different goals, thus providing the opportunity to identify different factors of success. Some highlights are presented below.

From5To4 works in very different contexts
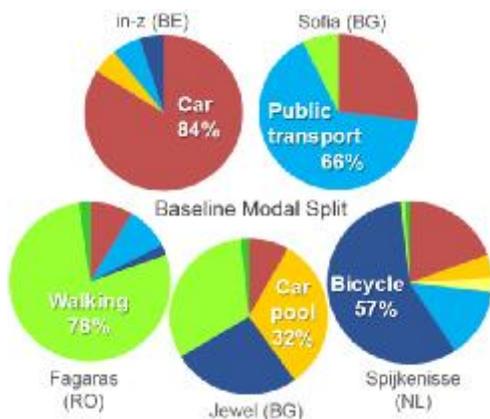
From5To4 had positive results with every organisation that has played the game, independently of the baseline modal split. There have been observable behaviour changes in companies with high car use and in companies with a high use of sustainable modes.

From5To4 effects go beyond commuting trips

50 employees of DTV Consultants & Organiq New Media (NL) played the game for a period of 4 months. Employees reported a change of behaviour in their commuting trips but also in terms of business travel.

From5To4 works even offline

Most of the 30 employees of Floordam (BE) did not have an easy access to computers. While it implied extra work from the organisers, this experience shows that the game also works offline.

From5To4 can bring a company together

24 employees of Jewel (BG) participated in the game during a three month period. The company was glad to participate, as they felt the game made employees happier and proud of their community.

From5To4 can complement other mobility measures

Nokia (PT) used the game to boost the use of recently built facilities such as showers and parking for bikes, as well as a carpooling service for employees.

From5To4 helps setting the example

Several local authorities have played the game: Sofia (BG), Brasov, Bistrita & Fagaras (RO), Spijkenisse (NL), Lisbon & Braga (PT). Their main motivation was to set the example to other organisations and companies.

Long games require additional motivation

60 players in Bistrita (RO) participated in the game during a six month period. Due to the long duration of the game, some additional measures were needed to maintain interest.

High competition makes demanding players

At Siemens (RO), the teams were highly competitive, leading to a very high participation rate and an increase of 45% in the usage of sustainable modes. The high level of competition led to complaints over the uneven dimension of the teams.

Enthusiasm is essential

45 employees of ANA (PT) played the four month game. The F5T4 champions within the company were very enthusiastic and were able to motivate the employees. There was an improvement rate of 42%.

Everybody loves Mobi!

Players never forget to personalise their Mobi avatar, and most players refer to little Mobi as one of the main motivators to keep playing and act sustainably.

Section 8: Market exploitation

Legacy

All partners indicate further possibilities for the tool and initiatives and first positive contacts in other countries (Denmark, Germany, Hungary, Luxembourg and also US, Colombia, New Zealand) have been established during the project. A requirement is an easy and smooth access to the tool and the willingness for companies or third parties to pay for it.

MORE INFORMATION ON THE LEGACY OF THE PROJECT CAN BE FOUND IN MOBI REPORT D5.6 – CAPITALISATION PLANS, AVAILABLE AT THE MOBI WEBSITE

www.mobi-project.eu