

**POLICIES & PROJECTS** for a safe, sustainable and autonomous home-school mobility **REGGIO EMILIA** 

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Safe, sustainable and autonomous home-school mobility is a strategic choice for the city of Reggio Emilia, which includes, among its priority objectives, implementing the right for every citizen to move safely.

For a long time, the Municipal Administration has been committed to the safety of home-school journeys and redesigning the city to create pleasant and lively contexts.

This effort has come to fruition over the years with numerous programs and experiments, the signing of the "Manifesto for safe, sustainable and autonomous mobility in home-school journeys", the implementation of projects for **the shared use of public spaces** in front of schools which must return to be a space of **relationship** and sharing by subtracting them to the predominance of motor vehicles.

Experiments such as Strade Scolastiche (School Roads) and Urban Tattoos are some of the ways the Administration has identified to pursue this goal.

What just one generation ago was normal for all children - that is, to be able to move on their own to go to school or for their short daily travels - is now almost completely precluded to new generations.

If we are able to design a city, or a piece of a city, where a child - who is the weakest road user - can move safely, it will benefit the entire community.



## INTRODUCTION HOME-SCHOOL MOBILITY POLICIES IN THE MUNICIPALITY OF REGGIO EMILIA

The Municipal Administration, starting from the Urban Mobility Plan - PUM2008, has decided to invest time, resources and energy in promoting Policies in favour of home-school journeys which are safe, sustainable and autonomous, through an interdisciplinary approach that tackles in a balanced way issues of road safety, environmental sustainability, the health and autonomy of children, safety around the schools, pollution and traffic, coordinating the planning of public areas with educational actions and the management of mobility demands.

The "Manifesto for safe, sustainable and au-



tonomous mobility in home-school journeys", a strategic agreement (signed in 2009, as part of the PUM2008) to involve different persons and entities in a shared planning project and to develop together actions plans, projects and shared commitments, is central in this approach.

A fundamental element of this project is the figure of the School Mobility Manager, a trained and motivated teacher in each School who works on these themes, liaising between the school, the Municipality and families. In order to disseminate the culture of (safe, sustainable and autonomous) mobility and to ensure that going to school on foot or by bicycle with friends is not an occasional experience but becomes a consolidated practice of accompaniment and organisation on the part of parents, the Municipality of Reggio Emilia, besides infrastructural measures, has offered, and will continue to offer, to families and teachers information and awareness programmes on the themes of Mobility, as well as projects and actions over a medium-long-term period.

MOTIVATIONS. Home-school mobility has a strong impact on the environment, on the city and on urban mobility. For nine months of the year, every school is a strong generator of urban mobility; thousands of students, parents, teachers and auxiliary staff, in fact, travel to school every working day, at least twice a day. More than half of these journeys are made by private car (ECI-6 indicator data). When the

schools are open, the increase in traffic and the congestion of the road network is evident to everyone. The fact that this increase is only 15% of total city mobility (PUM2008 data) shows that it would take little to shift the balance between free circulation and remaining blocked in the traffic. Using the private car in homeschool-home journeys also generates pollution, congestion and accidents, and reduces opportunities for physical exercise, socialising and autonomy of the children.

The home-school component therefore plays an important role in the entire city system since, on the one hand it has a significant impact at the most crucial times for urban mobility (the rush-hour); on the other hand, it affects a series of important aspects for urban development (the shared use of public spaces) and for social aspects (quality of life).

A Policy that acts to modify home-school journey habits must therefore take account of the importance and complexity of the issue through an **interdisciplinary approach** that tackles associated themes in a balanced way. This approach requires **the contribution of a series of operators**, from teachers to specialists in urban planning, to institutions and families, according to a shared idea that involves all the participants with their skills and concerns, defining a mix of different solutions and approaches. It's necessary, moreover, **to establish a framework to work with**, which is used as a point of reference for everything concerning home-school Mobility.

FUTURE OBJECTIVES AND PROJECTS. For more than ten years the Municipality of Reggio Emilia, through the Mobility Department, has been committed to a Policy of developing safe, sustainable and autonomous home-school journeys, starting from the BiciBus experience in 2003 and arriving in 2009 with the sharing of the "Manifesto for safe, sustainable and autonomous mobility in home-school journeys" and then subsequent years with the experimentation of highly structured projects and initiatives such as the Traffic Snake Game and the Strade Scolastiche (School Roads) strongly supported by the Istituti Comprensivi (School Complexes) and families.

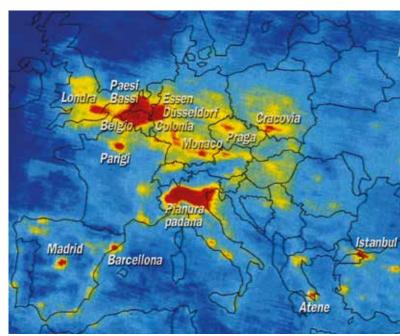
On the basis of the experience acquired, the new projects are focusing on continuing to work inside schools in **educating and promot-**



ing awareness of transport choices, inserting in the policies already in progress new methodologies and new actions to increase the use of sustainable means of transport in homeschool journeys placing greater attention on the passage between primary and secondary schools as fundamental moments of change in the habits of children, youngsters and their families in their journeys. Another important theme that the Municipality of Reggio Emilia wishes to explore is the shared use of spaces around schools, with an increase in safety for the students that go to school on foot or by bicycle. The involvement of numerous operators in the territory affected by the issue is fundamental for the implementation of the planned/programmed activities. The different actions planned will therefore be accompanied by a process of involvement and participation on the part of local stakeholders in the sharing of objectives and strategies, a process which we hope can lead to the updating of the Manifesto itself.

THE PUBLICATION. This publication intends to be a brief but complete summary of the main projects set up by the Municipality of Reggio Emilia since 2003 on the theme of homeschool Mobility.

More information on the question and on the projects in progress/implemented by the Municipality of Reggio Emilia can be found on the website: http://www.comune.re.it/casascuola





#### SCHEDULE 1A - TRAFFIC AND CLIMATE

Atmospheric pollution and climate change: local and global aspects; the role of local administrations. Abstract from the report by Dr. Giovanni Ferrari to the Course for teachers "My city is my backyard" - 2013

ATMOSPHERIC POLLUTION. One of the main components responsible for climate change is certainly atmospheric pollution: air whose composition exceeds the limits established by law for the purpose of avoiding harmful effects on man, animals, vegetation, materials and ecosystems in general is defined as polluted. There are primary pollutants (those which are emitted directly into the atmosphere in their natural state; their emission into the environment derives from the release of substances or particles - e.g. CO, dust - produced by a certain sector) and secondary pollutants (those that form in the atmosphere through chemical reactions between various substances present - e.g. ozone). The sources of atmospheric pollution can be natural (volcanoes, fires, ...) and anthropogenic (vehicle traffic, domestic heating, industries and business activities, agriculture, ...). With regards to vehicle traffic, diesel vehicles mainly emit carbon dioxide (CO2), PM10, hydrocarbons (HC), nitrogen dioxide (NO2) and sulphur dioxide (SO2); petrol vehicles generally emit CO2, PM10, NO2 and CO, while methane and LNG vehicles emit NO2 and CO2. As can be seen, CO2 is a very frequent component and contributes to the so-called "greenhouse effect"; this is due to a series of gases present in

the atmosphere (carbon dioxide, methane, water vapour) that influence earth temperature: as a matter of fact, without the greenhouse effect, the temperature of the globe would be around 30 degrees lower, that is, fluctuating at around -18°C. Greenhouse gases have two main functions: 1) they filter solar radiation; 2) they block the release of infrared radiation. Sunrays tend to "bounce" off the earth's surface towards the atmosphere, taking with them atmospheric heat: the greenhouse gases prevent their complete dispersion into space like a gigantic greenhouse. In itself, the greenhouse effect is a positive phenomenon; the problem arises with the excessive presence of greenhouse gases in the atmosphere. This phenomenon causes an increase in the earth temperature. An increase in these gases, especially carbon dioxide, is caused mainly by the combustion of carbon and petroleum. Carbon dioxide generally lasts in the atmosphere for around 100 years. We wouldn't be able to reduce its presence in the atmosphere in a short time even if we stopped producing it today.



THE KYOTO PROTOCOL. This problem is a concern at a global level and the Kyoto protocol goes in this direction: it's an international treaty on environmental issues relating to global warming undersigned in the Japanese city of Kyoto on 11 December 1997 by more than 160 countries during the COP3 Conference of the fourth Convention of the United Nations on Climate Change (UNFCCC). The treaty provides for the obligation of industrialised countries to reduce emissions of polluting elements (carbon dioxide and five other greenhouse gases, that is, methane, nitrogen dioxide, hydrocarbons, perfluorocarbons and sulphur hexafluoride) to an extent of not less than 5% compared to the emissions registered in 1990 - considered as the base year - in the period 2008-2012.

"THE COVENANT OF MAYORS". At the same time, in 2008 the European Commission launched the "Covenant of Mayors" with the aim of involving, on a voluntary basis, local communities in initiatives to reduce emissions of CO2 in cities by 20% by 2020 through the implementation of a Plan of Action for Sustainable Energy that provides for implementation times, dedicated human resources, monitoring, information and education. The Municipality of Reggio Emilia joined the Covenant of Mayors in 2010 while it was already implementing the LIFE "LAKS (Local Accountability for Kyoto goalS)" project, which established the methodology for calculating CO2 emissions and which led to the drafting of the Municipality of Reggio Emilia's "Action Plan for Sustainable Energy (SEAP)". The Plan refers to the period from 2000 (year of reference) to 2020, in which the emissions in 2000 must be reduced by 20% by 2020. The Municipality, considered as a public body, in 2000 directly produced 5% of CO2 emissions; the reduction of 20% of pro-capita CO2 in 2020 will therefore only be possible with the strong involvement of all other local components (participated companies, industry, agriculture, trade, etc.). The actions taken from 2000 to 2008 (year of approval of the Energy Plan) have lowered CO2 already by 9.7%, largely thanks to district heating and the relative network. Through actions programmed for the 2009-2020 period, the Municipality will further lower CO2 by 12.2%, reaching in 2020 21.9% and thereby exceeding the objective of 20% indicated in the Covenant of Mayors.



### **SCHEDULE 1B - EXERCISE AND HEALTH**

Autonomy and the importance of daily exercise. Not just the gym and the swimming pool. Abstract from the report of Dr. Gianni Bartoli (Paediatrician) to the Course for teachers "The city is my backyard" - 2013

Interest in health questions have increased in the last few years, not only with regards to individual responsibility, but also as a right-obligation that involves the entire community. Physical exercise, if practiced regularly, is a determining factor for maintaining or improving an individual's health. In contrast, sedentariness is a significant risk factor for the onset of chronic-degenerative pathologies and paramorphisms of various organs. It is universally accepted in medical fields that adequate physical activity associated with a correct diet can prevent the risk of children being overweight. The promotion of physical activity is one of the objectives of the National Prevention Programme and the systemisation of motorial activity in schools is an objective of the Ministry of Education.

In June 2010 the national survey "Okkio alla salute" (Pay attention to health) collected interesting data on nutritional and motorial habits of children in primary schools. The data collected showed that children in our region do little physical exercise. It is estimated that just 1 child out of 6 has a level of physical activity recommended for their age, also due to reasons linked to the fact that they go to school

by motorised vehicles, they play little outdoors and don't do enough structured sports activities. The growing availability of televisions and videogames, together with the profound changes in the composition and culture of the family, has contributed to increasing the number of hours spent in sedentary activities. Scientific evidence shows that a reduction in time spent in front of the television on the part of children is associated with a reduction in the risk of being overweight, due mainly to the lack of intake of calories linked to food consumed during those times. Compared to the recommendations, many children exceed greatly in the use of TV and videogames, particularly in the afternoon, when they could dedicate time to more healthy activities, such as games involving movement, or sport or activities with



their friends. These sedentary activities are certainly boosted by the fact that one child in three has a television in their own bedroom. In our region it is common (over 1 parent in 3) for mothers with overweight/obese children to underestimate the weight of their child which does not coincide with the actual weight measured. The situation is similar with regards to the perception of the level of physical exercise of their children: only 1 parent out of 3 has a perception that seems to coincide with the actual situation. In 2010 all family paediatricians in the province of Reggio Emilia initiated a study of the effectiveness of counselling aimed at overweight children. The families involved had periodic interviews with the agreement of proposals to modify nutritional habits.

The preliminary results of the study have recently been presented.

It has been shown that the school plays a fundamental role in improving the weight of children, both by creating favourable conditions for correct nutrition and the performance of structured motorial activities, and by promoting, through education, a correct lifestyle. The school is also the ideal context for creating opportunities for communication with families that are reluctant to get more involved in initiatives for the promotion of healthy eating and physical activity for children. The opportunity offered by schools to their students to do extra-curricular motorial activities could have a beneficial effect, besides on the health of the children, also on their habit to prefer





activities involving physical exercise. Academic literature suggests that to be effective, prevention must provide for the participation of the school and the family through **integrated programmes**, involving different social sectors and contexts and multi-components, which target different aspects of the child's health, such as diet, physical activity, the prevention of factors of risks associated with age, with the general objective of promoting the adoption of healthier lifestyles.

Equally important is making the urban landscape "children friendly", increasing public parks, pedestrian areas and cycle paths in order to encourage physical activity in the open air. The initiatives promoted by the health operators, schools and families can be successfully carried out only if the community supports and promotes better dietary and physical exercise conditions for the population. As a result, the collaboration between public and private institutions and organisations is essential for ensuring that the possibility of making healthy lifestyle choices is not just the responsibility of the single individual or the single family, but rather, sustained by a collective responsibility. Physical activity is also linked to sustainable mobility policies; in fact especially regarding children, there are a number of factors that, for parents but also, as a consequence, for their children, can create concerns, fears and veritable barriers that lead to inactivity. The greatest among these is the fear of road accidents, but there is also atmospheric pollution due to the quantity and quality (speed, intense traffic, etc.) of road traffic in urban and extra-urban areas. In these conditions, education that aims to impart correct behaviour and habits in daily movements risks contrasting with an incoherent viewpoint that seriously blocks any change.



### SCHEDULE 1C - MOVING TO GROW

The educational opportunities of mobility for children and adults. Abstract from the report of Dr. Lorenzo Vascotto (Paediatrician) to the Course for teachers "The city is my backyard" - 2013

The theme of sustainable mobility has in recent years increasingly become a topic of debate between citizens, institutions and public opinion; moving around the city using means which are more respectful of the environment and with less impact from the point of view of pollution and safety, is an objective shared by various quarters and different contexts. The education and school world has taken on the task of increasing awareness of the importance of home-school mobility for its students and

their families, developing projects and actions that can foster good practices and ideas with respect to the greater use of bicycles, public transport, and moving around on foot.

From an education point of view, what can the different forms of urban mobility mean for adults and children? I feel that there are various positive aspects that the experience of mobility can generate in growth and relational processes of the youngest and of adults. From a personal autonomy point of view, from the construction of a personal identity and the ability to concentrate and pay attention to our surroundings, for example, going to school on foot or by bicycle, as well as using public transport, presumes a series of skills and processes (mental and relational) which are more complex than in the situation of going by car:



the road, with its rules and conventions, with its languages and presence, with its risks and unpredictability, is a context with generates and fosters resources, effort, concentration, attention, and the need to relate to the space around you. These are skills which, developed spontaneously and directly by the environment, help children and youngsters to have better school results, as a number of recent studies have shown. Stepping on and off a pavement alone, identifying the right moment to cross the road, choosing the best route for your destination knowing how to find your way, become opportunities to put yourself to the test and do it alone, perhaps under the supervision of an adult who accompanies but does not take away opportunities for action and reflection from their child. Confidence/familiarity with

a situation of risk and effort and the ability to accept a mistake, giving it the right amount of seriousness and significance, are fundamental aspects in the growth and development of a child which sustainable mobility can provide. An example is the possibility of walking despite a bit of rain: it's necessary to take more care and it's possible to make some errors of judgement, getting your shoes or trousers wet because maybe you put your foot in a puddle. In this case, it is possible to encounter risk, exertion and error, and allows the children to develop a more resilient attitude, giving them the chance to exploit their own resources to overcome adversities, increasing both their ability to accept mistakes and errors, and to have faith in their own abilities. Also from a social point of view, actions connected with





mobility can strongly contribute to increasing the sense of belonging to a territory and to a community: walking along the street, passing through the streets in your neighbourhood, crossing roads, squares, junctions and pavements involves relating both with the environment and with the people that you meet, a few at a time; in this way, it is, moreover, possible to reduce the perception of danger and mistrust of others, which are much in evidence in the public opinion.

In conclusion, I believe that it is important to invite all those that have the real possibility to practice sustainable mobility to do so: this choice offers benefits not only from a health and road safety point of view, but also and es-

pecially, from an educational and social point of view. Those who move their body also move their thoughts and ideas, their mood and their perception of identity. Only with this awareness can we contribute to establishing the good practices and ideas of sustainable mobility in the lifestyle of children, youngsters and their family, transforming its often perceived status as a fashion and trend, into a convinced choice and established value.



#### **SCHEDULE 1D - TRAFFIC CALMING**

Main characteristics and aims. Abstract from the report of Arch. Matteo Dondè to the Course for teachers "The city is my backyard" - 2013

THE "AGGRESSIVE" ROAD CULTURE. Too often the roads in our cities are considered as belonging to the cars. In actual fact, the road is an urban space shared by various categories of users, from pedestrians to cyclists, from motorists to motorbike riders. The effect of this wrong conviction is a use of the road which is aggressive, especially on the part of motorists, with negative consequences from both a safety and from an educational point of view.

CYCLISTS ARE ROAD VICTIMS. In urban areas 80-90% of the pedestrians involved in accidents are injured, against 5-10% of motorists. According the analysis of road accidents published by ISTAT (the Italian National Statistics Office) and ACI (the Italian Automobile Club) in 2011 in Italy there were 205,638 accidents with 3,860 deaths and 292,019 injured. These are very high figures which, besides compromising the quality of life in our cities, cause social costs for the community (deriving from consequent hospitalisation and medical care) which in Italy account for 2% of the GDP (30 billion euro).



SPEED IS THE DETERMINING FACTOR IN THE SERIOUSNESS OF AN ACCIDENT. The effect of being hit by a vehicle depends on its speed: for example, a collision with a car travelling at 60 Km/h corresponds to a fall from 14.4 metres (probability of death: 85%), while a collision with a car travelling at 30 Km/h has a much lower effect, corresponding to a fall from 3.6 metres (probability of death: 20%). The human eye is not made to perceive high speeds: we perceive only a part of what happens on the roads and at their edges. The speed of 50 Km/h is incompatible with the right of way given to pedestrians: in many situations the car does not have time to react and stop.

### THE OBJECTIVE OF SAFETY ON OUR ROADS.

To make the road a safe place for all users, it's necessary, therefore, to reduce the speed of motor vehicles, making our roads safer through the technique of "traffic calming" and the development of "30 zones" or "Residential Areas with traffic calming".

### TRAFFIC CALMING IS A SIGN OF PROGRESS



- TRAFFIC CALMING. As we have seen above, at low speeds it's easier:
- to avoid accidents that involve weaker road users;
- to communicate between motorist and pedestrians;
- to perceive reciprocal intentions and avoid dangerous behaviour; motorists are more willing to stop to give precedence to a pedestrian crossing. Numerous studies, carried out in countries that for many years have adopted characteristic traffic moderation techniques, show that a reduction in speed brings benefits not only for the weaker road users, but also for the motorists themselves.
- IN RESIDENTIAL AREAS. They are defined areas, generally delimited by main road routes, in which priority is given to the residential aspect. It's a part of the city furnished with local services (schools, markets, churches, shops, public and social services ...) and affected by traffic circulation which is predominantly local. The speed limit is 30 km per hour in the internal roads.
- PRIMARY OBJECTIVES: the safety of mobility areas in urban residential areas; greater multi-functionality of the urban street which, with the widespread diffusion of private motorisation, has ended up being almost exclusively a space dedicated to motor cars; improvement in the environmental quality of the public area.

# SCHEDULE 2 - THE MANIFESTO FOR SAFE, SUSTAINABLE AND AUTONOMOUS MOBILITY IN HOME-SCHOOL JOURNEYS

Memorandum of understanding undersigned in 2009 by various public entities in Reggio Emilia to promote sustainable and safe home-school journeys

why. In the 1970s in Italy, 80% of children went to school on foot or by bicycle, while to-day more than 2/3rds go to school every day by car. What's changed since then? The choice to use the car, augmented by the teachers' obligation - at the end of school - to deliver minor students to an adult, often derives from the perception of greater safety and speed or a simple choice of convenience for the accompanying adult. The daily use of the car, however,

generates numerous problems for the children, the school and the city:

- Less exercise and lower health (the lack of regular physical activity causes excess weight which, at the paediatric age, leads to risks of cardiovascular diseases);
- Less socialising and autonomy (the lack of independent activity in the open limits opportunities for the autonomous growth of children and opportunities for socialising with their peers; the reduction in opportunities for exchange leads to an impoverishment of social relations both for children and adults);
- More congestion and accidents (if children are taken to school every day by car, this creates chaos in front of the schools, congestion in the surrounding residential areas and creates a vicious circle in mobility: more cars in circula-



tion, lower road safety and an increase in the perception of danger, favouring the use of the car also on the part of other families);

- More pollution (closing the children in cars does not protect them from breathing polluting substances. When we use the car we dirty the air we breathe, both outside and inside the car, and we increase the level of traffic danger). Home-school mobility is therefore a complex theme that involves different fields such as mobility, health and lifestyle, the management of public spaces, communication, education and pedagogy, and road safety. For this reason, it is necessary to have a multidisciplinary approach to the theme which involves the coordinated and shared participation of all public and private entities that for various reasons are affected by the theme.

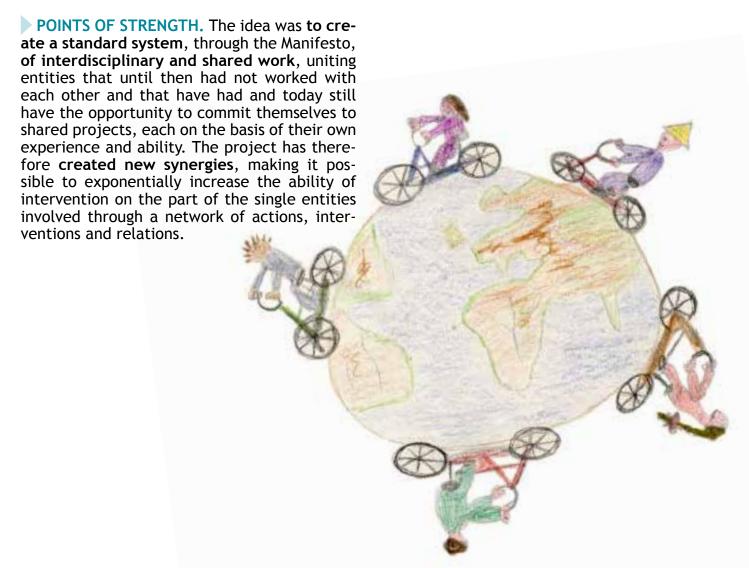
what It is. In April 2009 the Municipality of Reggio Emilia launched the "Manifesto for safe, sustainable and autonomous mobility in home-school journeys" to involve various entities in Reggio Emilia in a joint plan and to develop together shared lines of action, projects and undertakings on the theme of home-school mobility. The Manifesto, the reference framework for the Municipality of Reggio Emilia as part of its home-school Policy, was therefore drawn up to ensure that going to school without the car and with friends was not an occasional experience, but became a consolidated habit and an opportunity to improve health, safety, the environment, autonomy, social in-

teraction, schools and the local area. Every signatory (the Municipality, School Districts, ARPAE (the local Environmental Agency), Local Health Units, the federation of Paediatricians, the FIAB Re Association, the Agency for Mobility, the Provincial School Department, The Road Safety Observatory) is committed to implementing, directly or contributing to implementing, the projects contained in the Manifesto and, more generally, to promote homeschool journeys which are more autonomous, sustainable and safe, each on the basis of their skills and abilities.

The Manifesto, which in concrete terms is structured along a number of interdisciplinary lines of action (education, communication, promotion, safety, services, and planning), originally provided for 9 specific projects, subsequently expanded over the years, for making home-school journeys safe and for promoting sustainable transport lifestyles and habits, involving children, families and teachers in a new approach to mobility and the use of the territory, projects such as, for example, the establishment of a School Mobility Manager, the introduction of BiciBus and PediBus and the promotion of Car Pooling, experimentation of School Roads, the organisation of Laboratories on mobility and didactic outings with sustainable means of transport, and the Collaboration with Paediatricians.

WHO IT IS FOR. The Manifesto is aimed at all individuals / public and private entities /

institutions/associations that for various reasons are affected by the theme of home-school mobility.



### SCHEDULE 3 - THE SCHOOL MOBILITY MANAGER

A reference figure in every school, to promote and develop safe, sustainable and autonomous home-school mobility.

- why. All the actions and projects aimed at safe, sustainable and autonomous home-school mobility will only become fully effective if there is an ongoing relationship between school institutes, families, the Municipality and all the other persons and entities involved. To this end, it becomes essential to identify a teacher in every school the School Mobility Manager (SMM) who will be the reference figure and link between the Municipality and its Policies for Mobility and the users of the School.
- WHO IT IS. The School Mobility Manager (SMM), a figure set up by the Municipality of Reggio Emilia in 2009 as a major element of the "Manifesto for safe, sustainable and autonomous mobility in home-school journeys", is a reference teacher for the theme of mobility for their school and is able to:
- act as a spokesperson for the demands and problems of the school and of families regarding mobility;
- receive and propose initiatives aimed at sustainable mobility education;
- **encourage** safe and sustainable forms of transport;
- foster coordination between school institutes and the Municipality in order to share

and monitor objectives and sustainable mobility projects. Given that every school establishment has its own peculiarities, it is essential that the SMM is a teacher who effectively works in that particular structure and is able to adapt the proposals from the Municipality and other entities to their own school situation.

THE SMM NETWORK. The SMM network is the combination of actions implemented by the Municipality and dedicated to the promotion, training and maintenance of this role. It relates, therefore, to diversified actions in the areas of Education, Organisation, Communication and Participation and is mainly composed of: periodic meetings, the promotion of specific activities and initiatives (which can be both ongoing, e.g. BiciBus, and new, e.g. the Torneo Cammina e Pedala (Walking and Cycling Com-



petition) or TSG), ad hoc training, and meetings between the SMMs themselves.

- TRAINING. The Municipality periodically offers motivational and technical training for all SMMs, teachers and educators interested in introducing mobility themes into their daily activities with students. The course has the common theme of mobility and the use of alternative means of transport to the private car, but from time to time it covers different points of view relating to autonomy and the importance of daily exercise, atmospheric pollution and climate change, educational and growth opportunities, and the principles and purposes of traffic calming. Numerous practical examples are presented to the participants to see concrete examples of the theoretical concepts introduced during the meetings with experts.
- **WHO IT IS FOR.** The activity is aimed at teachers in infant schools (3-6 years), primary schools (6-11 years), 1<sup>st</sup> level secondary schools (11-14 years) and 2<sup>nd</sup> level secondary schools (14-19 years).
- SOME FIGURES. As suggested by the Municipality, starting from the 2009/2010 school year, most primary and 1st level secondary schools (the 6-14 age band) and various 2nd level secondary schools (14-19 years) in the city began to appoint each year a teacher with the role of SMM.

POINTS OF STRENGTH. Investing in the creation and training of the SMM figure is an effective way to reach the large and diversified public of School users. Every School has, in fact, its own peculiarities and it is therefore essential that there are people that work in these structures that are able to speak with colleagues and families and transfer Mobility experiences and concepts using a language appropriate for each situation.



### **SCHEDULE 4 - BICIBUS AND PEDIBUS**

A colourful line of children on their bicycles or on foot going to school together in safety every morning, accompanied by volunteers (parents, grandparents, teachers) along pre-established safe routes. The same scene is repeated for the journey home.

- WHY. The main objectives of the BiciBus/ PediBus (BB/PB) project is summed up in the key words:
- safety, the children form part of a large, visible group supervised by adults that move along safe, indicated and easily identifiable routes; socialisation: it allows children and parents to create new social relations;
- exercise and health, it gives children and parents the opportunity to do regular exercise;
- autonomy, it helps the children to become more independent;
- air, it contributes to reducing traffic congestion and improve the quality of the air;
- energy saving, it allows for a reduction in the consumption of energy and fossil fuels;
- road education, it allows the children to

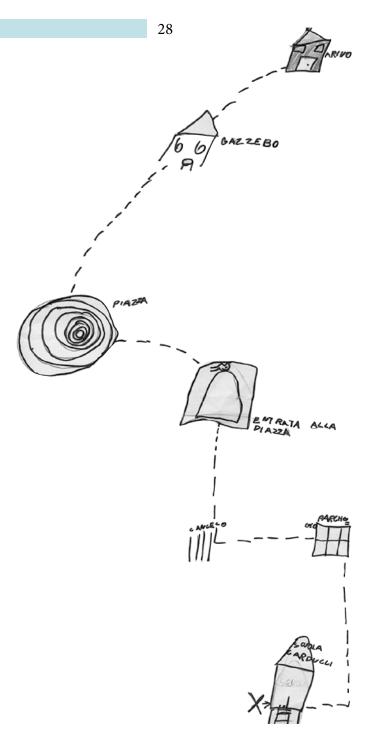
learn to orientate themselves in their area and to acquire better awareness of road dangers.

what IT IS. The BiciBus is a group of students that goes to and comes back from school by bicycle accompanied by volunteers (parents, grandparents, teachers, ...) along pre-established routes which are safe, marked with signs on the ground which are easily visible to children and motorists.

The PediBus works in the same way, but the group moves on foot.

- HOW IT WORKS. Like real buses, the BB/PB routes have an end-of-line and intermediate stops, duly indicated with signes that show the time of arrival and departure. Every morning the children go to the end-of-line or stops and wait for the volunteers and the group, and then move together towards the school. The children are then accompanied in the same way at the end of lessons. Volunteer parents take it in turns to accompany the group. To improve safety and visibility, the students taking part in the project are given a colourful and reflective kit to wear along the route, composed of a helmet, rucksack, trolley, a high visibility bib/band and poncho for the rain.
- at **primary school** students (6-11 years), involved also in activities in class regarding awareness and contextualisation of the theme, but since these students are minors and since in Italy they





cannot go to/from school on their own, reference is made directly to the families, who are actively involved in the project through accompaniment along the routes.

- with 70 children taking part. The BiciBus/Pedi-Bus project annually involves in its daily activity children, teachers and parents, on average from 10 primary schools in the city (25 overall, out of the 41 present). The project has won numerous national and international awards such as the First Prize in the "Competition of the 4th European Conference of Ministers of Transport on road safety" as the best European good practice of sustainable and safe mobility in home-school journeys (November 2006).
- POINTS OF STRENGTH. The project works because it permits students to move in safety: the BB/PB in fact creates "critical mass" and the recognition of the group is its strength. The direct participation and involvement of families in accompanying the children allows for the routes and therefore of the project to function over the long term.
- HOW TO SET IT UP. The procedure for implementing the BiciBus/PediBus project in a school and its continuation in subsequent years has been codified; the procedure involves the identification of a reference teacher (SMM) and the active involvement of families that have to guarantee accompaniment along the routes.

### **SCHEDULE 5 - CARPOOLING**

In the event it is not possible or there is no wish to move on foot or by bicycle, it is, however, possible to give a lift to other people or children of the school.

- WHY. To reduce the number of cars in circulation and congestion in front of schools.
- what IT IS. Carpooling is when a group of people agree to share a car and go together on the same journey. This system is very effective when recurring and similar routes are followed (the so-called repetitive journeys of a commuting nature), such as, for example, going to school, going to work or in the afternoon going to the gym. Car poolers can agree to share the fuel costs and often taking turns as the driver.



Also in the case of students, this system is very effective, benefitting not only from fuel savings and space, but also encouraging socialisation and the sharing of time and resources.

- SOME HISTORY. According to a recent publication by Rideshare Research of the MIT, the history of carpooling is almost as old as the invention of the car itself. The phenomenon of carpooling started soon after the launch on the market of the Model T Ford, the first car conceived for the middle classes. The USA was in the middle of an economic crisis at the end of 1914 and at the same time the American roads were flooded with these new cheaper cars. In San Francisco the more enterprising motorists started to offer car places at the price of a tram ticket (in San Francisco called jitneys). In nine months this fashion had spread to the East coast. The violent reactions of the public transport companies, which enjoyed the support of the local and regional institutions, blocked the proliferation of the idea. Carpooling took on also in the rest of the world in successive waves, particularly at times of economic difficulty. Thanks to the new technologies (internet, mobile applications,...) today there are numerous car-poolers also in Italy.
- HOW TO ORGANISE CAR POOLING. To promote the autonomous organisation of families into carpooling groups, it is possible to put up a notice board at the school entrance where teachers and parents can offer or look for a lift.

To make formed groups more visible and encourage the expansion of the project, it is possible to distribute to the car-poolers a coloured printout with the phrase "Noi andiamo a scuola in carpooling" (We're going to school in carpooling) to be displayed in the car (see the "Notices" section). The initiative can be promoted in school meetings and by speaking directly with the families that live near to each other

- at students, teachers and families of infant, primary schools (6-11 years), 1<sup>st</sup> level secondary schools (11-14 years) and 2<sup>nd</sup> level secondary schools (14-19 years).
- **SOME FIGURES.** A number of experiments in primary schools in the city have been launched with the initiative of single teachers.
- POINTS OF STRENGTH. Apart from reducing the number of cars in circulation near schools, it helps to strengthen the network of social relations in the local area.



## SCHEDULE 6A - LABORATORIES FOR PRIMARY AND 1<sup>ST</sup> LEVEL SECONDARY SCHOOLS

Range of proposals linked to mobility for class activities.

- WHY. Every day thousands of students are accompanied privately to school. Through educational activities, the Municipality is committed to spreading the culture of mobility right from the early school years, indicating alternative solutions to using the car and teaching also the basics of cycling in the knowledge that what is learnt when young affects life choices as an adult. The laboratories use experimental methodologies to transmit the basics of cycling and Mobility in general, with an approach that focuses on practical aspects and then, along the school career, expanding into theoretical motivations linked to the environment and the territory, to health and the development of abilities that lead to personal independence.
- who they are aimed at students and teachers of primary and 1st level secondary schools (6-14 years) and are organised further to the direct request of interested teachers.

### HOW THEY ARE STRUCTURED. Laboratories for PRIMARY SCHOOLS (6-11 years)

**Laboratories on cycling** - organised with the collaboration of the Tuttinbici-Fiab Association

(1st and 2nd classes) The first rides - Small gymkhana to check the children's level of cycling ability. (3rd and 4th classes) Identity card of the bicycle - Knowing the main parts of a bicycle and their functioning. (4th and 5th classes) Maintenance and History of the bicycle - Routine maintenance and the evolution of the bicycle to today.

Laboratories on Mobility - organised autonomously by the teachers using the "Tutta mia la città - Manuale per insegnanti" (The city's all mine - Manual for teachers" drawn up by the Municipality of Reggio Emilia - Mobility Department

(3<sup>rd</sup> class) Mobility and the territory - Recognising and appreciating elements of the territory encountered during the home-school journey; becoming aware of the different forms of mobility, reflecting on the points of strength and weakness of each.



(4<sup>th</sup> class) Mobility and health - Analysing the relationships between sustainable mobility and personal health, making comparisons between the needs of adults-parents-accompanying people and the desires of children on the theme of moving around the city, proposing and incentivising healthier home-school routes. (5<sup>th</sup> class) Mobility and autonomy - Analysing your level of autonomy, starting from daily movements, to foster personal growth also with a view to the passage to 1<sup>st</sup> level secondary school.

SCHOOLS (11-14 years) - organised in collaboration with the Tuttinbici - Fiab Association (1st - 2nd - 3rd classes) The bicycle is better. Presentation of the advantages of the bicycle to safeguard health and the environment and to encourage socialisation. The bicycle is proposed as an icon of an eco-sustainable lifestyle. (1st - 2nd - 3rd classes) Bicycle maintenance. Routine maintenance, repairing punctures taking off the wheel, the inner tube, putting a patch on, reassembly.

**SOME FIGURES.** The laboratories, operating since 2004, annually involve an average of 1200 students (60 classes) from primary and secondary schools.

**POINTS OF STRENGTH.** All the laboratories are **free**; there are no time obligations and the teachers can organise them at any time of the year, depending on the availability of the ex-

perts. Since Mobility is a theme overlapping with the didactic content of various classes. the laboratories can be "personalised" by each teacher with collateral activities of a humanistic, scientific and artistic nature. They are designed with a view to acquiring more abilities as the age of the student increases. A didactic outing using sustainable means of transport (bicycle, train + bicycle) are always offered to the classes that carry out the Laboratory experience as an opportunity to put the abilities learnt into practice. The Laboratory offers municipal Technicians the possibility of establishing direct relations with School staff, a fundamental element for carrying out more structured projects linked to Mobility.



## SCHEDULE 6B - FIRST STEPS \_ MOBILITY EXPERIENCE FOR DAY NURSERIES AND NURSERY SCHOOLS

First approach to mobility starting from the age of 3.

- WHY. The attitude to the different forms of sustainable Mobility develops according to the extent this theme accompanies a person in the growth. For this reason it is important to approach the theme of Mobility in an appropriate way, right from the Day Nursery and Nursery School years. The Mobility actions and projects aimed at the pre-compulsory school age (2-6 years), introduce the themes of mobility and autonomy of movement, promoting the learning of riding a bicycle, one of the children's first sign of autonomy. You don't learn to cycle on the roads and in the city immediately, but a long period is necessary to learn to assess the risks and your own ability, to recognise places, situations and rules, to interpret the behaviour of other road users. These abilities are acquired over time and once assimilated will accompany the children for all their lives.
- WHO IT IS FOR. Children in Day Nurseries and Nursery Schools (2-6 years), families and teachers.
- HOW IT IS ORGANISED. The chosen approach does not obviously follow the programmes offered in Primary and Secondary Schools, but focuses on forms of communication and sponta-

neous reflection according to the age of the children and of Reggio Approach, the pedagogic methodology in which the child is considered as the carrier of high development potential as well as a person with rights, who learns and grows in relations with others. The Mobility Department has provided municipal Day Nurseries and Nursery Schools in Reggio Emilia with a number of bicycles without pedals. These bicycles teach the child to learn how to balance in an independent way; the children learn this ability on their own. The result is that children arrive at Primary School already knowing how to ride a bicycle.



POINTS OF STRENGTH. - It's a low-cost initiative- - With the first supply of bicycles without pedals, the initiative triggered in the schools a focus on the theme that in certain cases has led to continuing the project autonomously, while in other Schools that didn't take part in the project led to replicating the idea. - It's often the first approach on the theme in the pre-compulsory school age band. - The attention towards the bicycle has aroused interest in getting to know the area around the schools involved and has led to the closure of roads in front of school structures for initiatives that have brought attention to the concepts of safety and sustainability.







### SCHEDULE 6C - DIDACTIC OUTINGS WITH SUSTAINABLE MEANS OF TRANSPORT

It is possible to use the bicycle and public transport, or walk in a school context during class activities but also during didactic outings.

- WHY. Having sustainable mobility experiences in the school context makes it possible to put into practice what has been learnt during the lessons and in the laboratories; for this reason, the Mobility Department offers and gives advice in the organisation of didactic outings with sustainable means of transport. Specifically, the skills learnt and developed in the laboratories on cycling are perfectly consolidated with a didactic outing by bicycle; it's an opportunity to combine a playful/ enjoyable aspect with a technical aspect. It's an ideal situation for class relations during which everyone has a chance to see how they get on with an activity that requires cycling ability - in some cases just learnt - but in a fun context and with the help of experts, on hand as needed.
- HOW THEY ARE ORGANISED. The Municipality, with the collaboration of the Tuttinbici-Fiab Association which also organises the cycling laboratories, offers classes to make end-of-year trips by bicycle. Itineraries of various difficulty and duration have been selected, differing in their characteristics but all with important environment and historical elements that allow the youngsters to test themselves

with a particular means of transport and to discover the territory with different rhythms from the classic school trip.

The main itineraries proposed are: 1) Po River (\*); 2) Crostolo Stream; 3) Pieve Romanica in S. Faustino, Ospitale di Rubiera; 4) The "Le Rotte" drainage system in Bagnolo in Piano.

- WHO IT IS FOR. For students and teachers at Nursery School, Primary School and 1<sup>st</sup> and 2<sup>nd</sup> level Secondary Schools (5-19 years).
- **SOME FIGURES.** The didactic outings with sustainable means of transport annually involve an average of 340 students (15-20 classes).
- **POINTS OF STRENGTH.** The didactic outings proposed: are low cost (free bicycles are used as well as public transport, cheaper than pri-



vate means of transport); - are easy to organise because itineraries are consolidated; they can be organised throughout the school year. The classes are accompanied by experts that provide their services free. If required, bicycles for the classes are available also for particular needs (adult/child tandems, bicycle equipped to transport disables people in a wheelchair).

#### DIDACTIC OUTING TRAIN + BICYCLE TO THE PO RIVER

WHY. The Po River area offers a series of varied environments, museums, villages and structures which are interesting for schools of every type and level. The routes proposed, largely on cycle paths, banks and minor roads, are safe also for school groups. Intermodal transport is also an economical, stimulating and educational way of moving around.

- From Reggio Emilia Central Station is able to carry 30 bicycles. The outings are made with the assistance of volunteers from the Tuttinbici-Fiab Association. It is necessary to book special tickets.
- WHO IT IS FOR. From nursery school to 2<sup>nd</sup> level secondary school (5-19 years), for classes and students with good cycling ability. SOME FIGURES. During the train's first year of service, the didactic outings proposed involved 280 students (13 classes).
- POINTS OF STRENGTH. Using the train, in an intermodal way with the bicycle, is an activity practically unknown to most students and is fascinating for this reason. It is easy to book tickets. It is a very economical day's outing. It can be organised to cover a number of days because there are various low-cost accommodation facilities in the riverside area.





## SCHEDULE 7 - GAMES AND COMPETITIONS

A series of activities, competitions, and promotional campaigns on home-school mobility with a playful approach.

- WHY. The means of transport for home compulsory school journeys, monitored regularly over the last ten years, have shown a predominance of the use of private means of transport, confirming this to be a habit which has taken hold over the years. To modify this habit, it is believed necessary among other things to stimulate in a playful and enjoyable way- through games, competitions, campaigns experimentation on the part of students and parents of alternative home-school means of transport to the private car which otherwise would not be taken into consideration by the families.
- WHAT IT IS. The scheme includes a series of different projects and campaigns experimented over the years and with a play/competition component in common and, in particular:
- Let's collect Green Miles (years 2003 2009, 4 editions) the collection of stamps in class for a series of sustainable actions (water sav-

- ing, differential waste collection, home-school journeys,....), with prizes for the most virtuous schools and classes, aimed at primary schools (6-11 years) and 1<sup>st</sup> level secondary schools (11-14 years);
- Walking and Cycling Competition (years 2011 - 2014, 4 editions) - competition between schools with the greatest number of students that move in a sustainable way from home to school and back (the innovative feature: collection points); prizes for the most virtuous schools and for all the participants; aimed at primary schools (6-11 years) and 1st level secondary schools (11-14 years). On competition days the students that arrive and leave school with their own bicycle (autonomously or organised in Bici-Bus) are counted, as well as those that arrive at school on foot from the collection points and who return to them by foot (autonomously or organised in PediBus). For journeys by foot, a maximum of two student collection points are identified at a minimum distance of 300 metres from the school, from where the students reach the school on foot and to where they will return after school.
- Traffic Snake Game (years 2015 2017, 2 editions) European awareness campaign through the collection of stamps in class for sustaina-





ble journeys in the home-school route, aimed at primary schools (6-11 years). The TSG is an simple and enjoyable opportunity for bringing the theme of mobility into the schools, encouraging children and families to move in a sustainable way through a game that lasts for two weeks: the children win a sticker every time that they go to school on foot, by bicycle, using public transport or car-pooling. Schools are free to set the objective to reach, filling the game board with the stickers won within the two week period.

- who IT IS FOR. The scheme is aimed, first of all, at primary school students (6-10years) and 1st level secondary schools (11-13 years), involved also through awareness and contextualisation activities in class on the theme, but since these children are minors and not able in Italy to go to/return from school alone, it is also aimed indirectly at the families.
- **SOME FIGURES.** An average of 20 schools participating and 4,000 students involved in each edition organised.
- POINTS OF STRENGTH. The playful approach and the competition mechanisms stimulate the participation and involvement of the students and families and are a good way of bringing changes over the long-term.





# SCHEDULE 8 - COMMUNICATION, AWARENESS AND INFORMATION CAMPAIGNS DIDACTIC MATERIAL

A series of projects - actions - events aimed at promoting, incentivising and encouraging safe, sustainable and autonomous mobility in homeschool journeys.

why. The means of transport for home-compulsory school journeys, monitored regularly over the last ten years, have shown a predominance of the use of private means of transport, confirming this to be a habit which has taken hold over the years. To modify this habit, it is believed necessary - among other things - to organise demonstrative and promotional events, to set up communication/awareness/information campaigns on the theme aimed at

the school world and to draw up specific material to be used in class and to propose to families at home.

what It is. The scheme includes a series of communication actions (the "Siamo nati per camminare" (We were born to walk) campaign, the "BiciSicura" (Safe Cycling) publications, "La città è il mio cortile" (The city is my backyard) posters, collaboration with Paediatricians, the "Condividere le regole per muoversi sicuri" (Share the rules to move around in safety) leaflet, the "Come respiri dipende da come giri" (How you breathe depends on how you move) publication, the "A Reggio Emilia andiamo a scuola in Bicibus e Pedibus" (In Reggio Emilia we go to school by BiciBus and Pedibus) leaf let, events and conferences (e.g. "Bimbimbici",

## tutta mia la città





the European Mobility Week, the "Easy Reggio" laboratories for citizens), as well as actions to support the didactic activity ("La città è il mio cortile" (The city is my backyard) - A course on urban mobility for teachers, the "La città a due ruote" (The city on two wheels) manual - the guide for mobility management activities, the "Tutta mia la città" (The city is all mine) manual - the guide for laboratories on mobility, the "Mobilità casa-scuola" (Home-school mobility) binder and CD - The kit for School Mobility Managers) each sharing the objective to create consent and a widespread culture on the theme of home-school journeys, as well as to modify consolidated habits.

- who IT IS FOR. The activity is mainly aimed at students, teachers and families of nursery schools (3-6 years), primary schools (6-11 years) 1st level secondary schools (11-14 years) and 2nd level secondary schools (14-19 years), but also at the general public.
- **POINTS OF STRENGTH.** The communication, awareness, and information activities are intended to be a basis and **support** for the projects and activities of the home-school policies.





## SCHEDULE 9 - SHARED USE OF PUBLIC SPACES

A series of projects - actions - events aimed at promoting the use of spaces near schools in a shared and safe way. They are initiatives that do not require infrastructural developments but have consequences on vehicle transit and parking.

why. The preponderance of private means of transport in accompanying students makes home-school routes and the area in the immediately vicinity of schools unsafe; Italian legislation that obliges the teacher to deliver the minor to an adult does not encourage autonomous journeys by the children and effectively multiplies single accompaniment of the children and, consequently, the use of private

means of transport. The result is that the immediate surroundings of the school are relatively unsafe because they are full of vehicles, to the detriment of opportunities for relations and exchange.

WHAT IT IS. The scheme includes a series of actions aimed at promoting the use of spaces near schools in a shared and safe way. There are two main lines of direction: the creation of school roads and highlighting the presence of the schools. On the back of experiences both European and Italian (e.g. Bolzano), the idea has been to develop, in situations in which the urban landscape so permits, to interrupt vehicle transit for a short period coinciding with school entry and exit times, The initiative, called Strada Scolastica (School Road) is



usually implemented through the positioning of barriers on the part of volunteers, largely parents of the school involved in the measure. Another series of actions proposed are based on clearly marking the presence of a school structure outside the school yards and on the roads that serve the Schools; this approach has the objective of communicating to motorists the need to adopt a particularly respectful style of driving to ensure the safety of the road users present. The same strategy can be applied using artistic methods to mark on the ground the spaces dedicated to cyclepedestrian Mobility.

**HOW IT IS ORGANISED.** The variety of actions proposed by the Mobility Department and by the Schools themselves, which have no precise

regulatory or legislative reference regarding Public Works nor in the Highway Code, have led the Mobility Department to establish a procedure - approved by the City Council through its own measure - to govern these procedures in order to bring them under the lines of action promoted by the "Manifesto for safe, sustainable and autonomous mobility in home-school journeys". The procedure establishes a series of steps which, from conception to completion, control and verify that the initiative complies with the legislation in force. At the end of the process the initiative is authorised with a Traffic Order signed by the School Head in the case of a School Road and with an explicit authorisation in the case of visual communication.





- WHO IT IS FOR. The entire school population of every type and level, teachers and families.
- SOME FIGURES. During the first two years of the project, 2 Urban Tattoos and 6 School Roads (of which 2 experimental) have been set up which have involved around 1900 students.
- POINTS OF STRENGTH. They are low-cost actions with great impact. They generate high participation of families and students. They become an asset of the school structures for which they were conceived. They are repeatable initiatives which have a high level of personalisation designed for the particular needs of Schools.





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