

Agenda 2005

di F. Trento

April, 30th, 2005 – EQ1

Meeting energy, conference and didactic booths
Minusio, Secondary school, from 09:30 to 12:00

May, 20th, 2005 – Mendrisio MobiliTI

Mendrisio, Accademia di Architettura

June 2005 – Inauguration of the first natural gas filling station

Bioggio

June 11th, 2005 – e-bike Day

Locarno, excursion with electric bikes

Registrations and information:

ZELO (Zero Emissioni nel Locarnese)

Tel. +4191 7910091

E-mail: zelo@maggiore.ch

June 11th, 2005 – Festa del Parco

Piano di Magadino, test drives of Twingo Elettrica
MES DEA

June 18th, 2005 – EcoDrive

Bellinzona, Pza del Sole, exhibition day

September 08 -11, 2005 – VEL EXPO TICINO

Lugano, Centro Esposizioni

with 8° VEL contest (with electric cars)

www.velexpo.ch

September 22nd, 2005 – International carfree day

Other events to be announced

28/04 – 01/05 Autonassa

Lugano, open air car exhibition in Via Nassa

30/04 – 01/05 Electric Car Rally

Varano, Italy

16/06 Mini Solar Challenge

Basle, solar cars contest

17/06 – 18/06 Rallye21

Basle

04/07 – 08/07 Fuel Cell Forum

Lucerne

For further information, please contact:
f.trento@infovel.ch or look up the news on
www.vel2.ch.

A Few Words From...

Monica Duca Widmer,
deputy of the Parliament (Grand Council) of Canton Ticino

Mobility has positively effected the quality of life and allowed our society to evolve enormously in a very short period of time.

Today, we are aware that if mobility continues to increase without change, it will soon reach a point beyond which its negative consequences towards the environment, the economy and society will be extremely difficult to bear. We realize this everyday, when we are stuck in a traffic jam or listening to news reports about the air quality.

The Swiss Confederation's goal is to guarantee sustainable development, also in the field of mobility.

VEL's activity during the past ten years has been directed towards awakening public consciousness and offering alternative models of mobility, because only with a society made up of people who are aware, not only of their individual rights, but also of their responsibilities, can we hope to move towards sustainable development.

Thus, the third international conference on sustainable mobility, on May 20th, 2005, which will deal with the subject of the education of youths and adults - represents one of the most efficient tools for helping create favorable conditions for change. Neither laws nor impositions are going to change our way of life: only convictions, matured through consideration of these kinds of problems, will determine a collective will power of "wanting to change" in order to live well and also allow those who come after us to live well.

Front Page

by R. Domeniconi

New ideas from the Montecarlo World Symposium

EVS-21, the 21st edition of the worldwide battery, hybrid and fuel cell electric vehicle symposium, took place in Montecarlo from April 2nd to April 6th, 2005.

Fuel cell technology requires a rather long time to develop. Thus, it is not possible to see significant yearly innovation in this sector. The world of the electric battery car is waiting for a battery that will allow more brilliant performance than those permitted by NiCd. Among eligible "papal" candidates, we have, besides Lithium (which still presents unsolved safety problems), the ZEBRA battery of MES-DEA of Stabio.

As far as two-wheelers are concerned, the number of products multiplies (just to mention an example: the yearly production of e-bikes in China has increased from 2 to 6 millions units).

Probably the most important element of the EVS-21 event is not actually technological, but rather political. Through various workshops—those of ministers and of those towns considered to be models for their applications in this field—it has become apparent that solutions linked to behavior and mobility regulation need to be found. This shows that technology by itself will not be enough to mitigate the negative impact of mobility; we will have to utilize technology intelligently in order to develop new rational and integrated mobility systems. This target can also be reached by training adults and, even more so, young people on sustainable mobility.

In this issue:

Mendrisio MobiliTI:
Sustainable mobility in teaching



Mendrisio Mobiliti

by F. Trento e A. Rota - Biadici

Sustainable mobility has not yet become an innate part of our society, thus, considering the fact that it is something we need, it must become a teaching and educational subject for both adults and children. Various aspects and proposals will be discussed and presented during the third edition of the international Mendrisio Mobiliti conference on May 20th, 2005.

The conference presents a varied program permitting focus on three fundamental aspects of sustainable mobility as far as instruction is concerned: adult training, youth training and education on home-school journeys. These topics more or less directly effect the entire population and it is for this reason that anybody might be interested in participating and would benefit from it.

It is above all an event which those working in the field of mobility should not miss, as it is an excellent opportunity to become familiar with exciting and successful projects which have been carried out in the world and to exchange ideas and observations with the experts.

Those working in the field of education should not miss it. Since they are first in line as far as teaching and training is concerned, they can gather useful hints from the observations and techniques that will be presented during the conference. Mendrisio Mobiliti also offers parents interesting topics for discussion and proposals on how to approach the subject of sustainable mobility and solutions for the home-school journey.

It should also not to be missed by politicians and all those who are appreciative of the theme discussed, because participation in the event will certainly be both fruitful and interesting, providing starting points for reflection, and examples of concrete solutions in order to learn oneself, be able to teach others, and create projects linked to the subject.

The final round-table discussion is going to be open to the public, with no registration required, offering the exciting chance to express one's own views and listen to various opinions concerning the subject: "The home-school journey: concern or opportunity?" This subject greatly concerns all school institutions, primary schools in particular, and the discussion is sure to be stimulating.

Through this same round-table it will be possible to evaluate the necessity for solutions to this form of mobility which must be sustainable from the point of view of pollution and traffic as well as child safety.

Mr. Carlo Croci, major of Mendrisio and President of AssoVEL2, the association managing the VEL2 Project, will welcome the guests and open the conference.

Following this will be the speeches of Mr. Marco Borradori, Head of Department of the Territory of Canton Ticino; Mr. Francesco Vanetta, Director of the Office for the Secondary Schools of the Department for the Education, Culture and Sport (DECS) of Canton Ticino and Mr. Leonardo Carioni, President of Regio Insubrica and Province of Como.

Of definite interest is the session dedicated to adult training, introduced by a presentation of the comparative results of various methods of teaching and training on sustainable transportation, obtained by a European project. The presentation of a training program for professionals in the transportation field will follow, financed by the European Community and a Flemish project for the diffusion of sustainable mobility through the training of employers and trade unions.

The afternoon will be dedicated to youth training, with a presentation of a Swiss project, and in particular with the example of Hamburg, exemplary in this sector on the European level, since sustainable mobility education has already been integrated into its yearly curriculum for compulsory education. It will also be a chance to find out about the teaching methods for the fourth year of secondary school, called "Learning about Mobility" and put together by the VEL2 Project in collaboration with DECS.

The Best Tradesman

by O. Bernasconi



Active dealers!

On this occasion we would like to point out the great dedication and extremely valuable cooperation shown by Marco Gerosa, the owner of the point of sale and assistance, situated in Via Canonica, nr. 7, Lugano.

Being active in the sale of, and assistance for, various makes of bicycles and motorcycles, he also deals with Bixs, FAAM, Flyer electric bicycles and Ego Helio, FAAM, EVT electric scooters; vehicles considered to be very appealing for city use.

Mr. Gerosa is quite active in promoting these vehicles and collaborates with us during the events dedicated to sustainable mobility which we organize at Ticino schools. Mr. Gerosa has taken up the activities of Ms Sylvia Gabutti who has decided to dedicate herself to new functions. We would like to take this opportunity to thank her for her precious contributions throughout the past years.

The focal point of the third section will be education on the home-school journey, a subject addressed to young people, their parents, and relevant authorities. Discussion will revolve around the examples of *pédibus* and *vélobus* in the French region of Loire, the school transportation projects of Pistoia, and the experiments carried out in Pesaro in order to help children to go to school by themselves, in a sustainable and safe way.

The conference will be chaired by Dr. Monica Duca Widmer, member of the Grand Council of Canton Ticino, who will then step down in favor to Mr. Claudio Mésoniat, Director of the newspaper "Giornale del Popolo", who will chair the final round-table. The conference is supported by the Department of the Territory of Canton Ticino, the Regio Insubrica and the Academy of Architecture of Mendrisio, and by various other sponsors: the Tourism Office of Mendrisiotto and Basso Ceresio; the Aziende Industriali of Mendrisio, ZEV Company, Giornale del Popolo newspaper, AutoPostale Regione Ticino and the MES-DEA Company in Stabio.

How to Participate

The complete agenda, information and the registration form, can be found directly online, by clicking on the conference banner on the web site: www.vel2.ch. All registrations must be sent no later than May 6th, 2005. Seats are limited and registrations will be accepted in the order in which they are received, so be quick to reserve a seat for the conference day in Mendrisio because it is worthwhile.

A Competition for Young People

For the third edition of Mendrisio Mobiliti we wanted the first year classes of the secondary schools of Canton Ticino to participate actively, and so we have presented them with a themed creative competition. The chosen theme is "Sustainable Mobility of Tomorrow" with the development of their own visions. Previous experiences have always shown us a great sensitivity, attention and creativity on the part of the school children concerning possible future vehicles. In order to let the students be as freely creative as possible, we have not given any kind of guidelines concerning the technique to be utilized, but only details on the dimensions and maximum weight of the work. The boys and girls will thus be stimulated to develop the theme with their own interpretation and representation (realistic or abstract).

On the Conference day, the works will be exposed in the entrance-hall of the Academy of Architecture and will be evaluated by a special jury, made up of some foreign speakers who will be talking that day. The two highest scored pieces will be awarded a free visit, for every student in the winners' classrooms, to the Museum of Transport in Lucern and the Museum Baumgartner of model railway collecting in Mendrisio.

The Technical Corner

by N. Mona

EUR01 – EUR05 Environmental Regulations for Cars

The feeling each of us has towards the environment, although different, are drastically changing as we are confronted by the negative phenomenon ascribable to our lack of respect towards it.

As far as the world of cars is concerned, we can surely affirm that our feeling towards the environmental impact caused by vehicles is constantly evolving. Actually, we might be reaching a new high point. In particular, I refer to the problem caused by particulate matter and carbon dioxide emissions, the main cause of the greenhouse effect. Today, more than ever before—particularly in neighboring Italy—Euro4 is a term that occurs always more often, especially related to city traffic bans. Also, various European countries and some Swiss Cantons favor Euro4 vehicles through a fiscal policy.

In order to face the increasing environmental threats due to the continuing rise in traffic, it has been necessary, since the 90's, to drastically reduce emissions, harmful to human health, coming from light and heavy vehicles fed with fuel or diesel in the traditional way. In Europe, these improvements have been stimulated by the introduction of severe regulations on emissions, known as Euro standards, which started with the Euro1 regulations.

Euro standards provide limits to the emission of substances harmful to the health:

• CO – Carbon monoxide

It is a highly toxic colorless and odorless gas, which is the result of incomplete oxidation of carbon in combustion. As it easily attaches itself to red blood cells, it inhibits the oxygen intake of tissues, muscles and the brain.

NOx – Nitrogen oxides

These are gases resulting from the combustion processes with air and high temperatures. They have a strong irritant effect on the respiratory tracts of humans. They also contribute to the formation of the ozone in the lower altitudes, especially during very warm weather.

HC – Unburnt Hydrocarbon

It consists of hydrogen and carbon atoms only, and is the result, among other things, of an incomplete oxidation of carbon in combustion. As with nitrogen oxides, it is the precursor of ozone during the summertime.

PM – Particulate matter

Particulate matter is made up of microscopic particles resulting from fuel combustion having traces of impurity (for example: sulfur). The finest particles are the most dangerous, since they can penetrate the lungs.

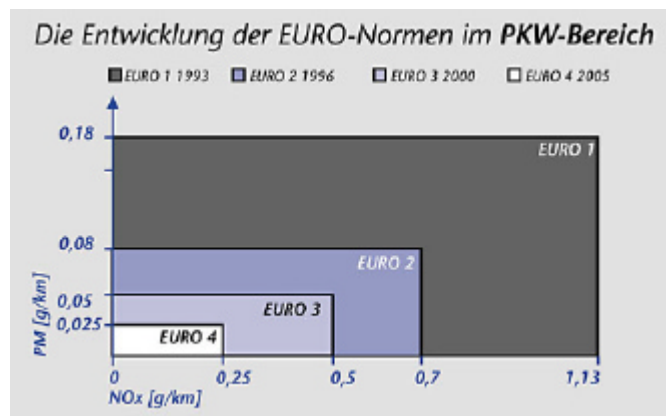
During the past years, legislation has been updated, becoming more and more severe (Euro2, Euro3, Euro4). The chart below shows how the limits on the emissions of particulate matter and oxides of nitrogen have been changing. Similar standards have been introduced in other countries also, such as Japan and the United States. Today, in Europe, Euro4 regulations are in place, compulsory since Jan. 1st, 2005 for all new models.

The evolution from the Euro1 to the Euro4 regulations has not only modified emission limits but also the methods used for testing and measuring. Testing is carried out on rollers, following a very precise speed

and acceleration scheme. In the past there were quite a few adjustments.

In particular, with the Euro4 regulation, the testing method no longer considers a period of 40 sec. for engine warm up. Emissions are measured from the start, with a cold engine. Therefore, the limited value of Euro regulations cannot be put directly into relation between themselves. In actual fact, the figures resulting from the Euro3 regulations would double if measured using the Euro4 cycle of tests.

The next update will be called Euro5 and is currently being drawn up. It should become effective between 2008/2009. The new limit values are not yet known, but we



presume (and hope) that they will impose the particle filter for diesel engines, just as Euro1 regulations made the utilization of the catalytic muffler mandatory.

VEL2 in the Municipalities



Bissonne is a lakeside village situated on the eastern end of the dam-bridge of Melide. The original center is a medieval fishermen's village (the center is protected by federal law), standing between the lakeside, the railway line and the highway. The territory includes a strip mainly covered by woods (the total area of the village covers 186 hectares: 143 of woods, 22 of built up area and 14 of road infrastructure) which borders Maroggia towards the south and

Campione d'Italia to the north. The population is around 800, with a strong presence of various non-Swiss nationalities, testifying to the village's particular residential vocation, linked to the neighboring city of Campione d'Italia and to the economic and cultural situation of Lugano and Lombardy.

Due to an exponential increase in traffic, the three large international mobility networks crossing the village territory (the railway line, the highway and the cantonal road) have become more and more influential on the quality of life of the population. This is the reason for the effort made by the political authorities during the last ten years to create a technical and administrative basis for finding solutions, partly at least, to the major environmental problems. Highway and railway line noise reduction, a new town-planning scheme and the feasibility assessment for the tunnel which will bypass the town center (freeing up the cantonal road from traffic in transit, Borromini Plaza) are the first results of this effort. Moreover, the detailed town-planning scheme for the town center will have completed by the year 2006 the general town-planning scheme of the village, concentrating on the architectural and urban recovery of this settlement, so important for the history and the landscape of the region.

The city council voted, in 2001, a sum to build the new "Ex Albergo del Pesce" parking lot situated at the town's south entrance. This has permitted an architectural reclamation of this place, especially important for the town territory, and furthermore the acquisition of very important work areas for the actualization of the southern portal of the already mentioned bypass tunnel.

When the sum was voted on, the council's legislative body decided to put an electric vehicle recharging station in the parking lot and for the parking lot's construction to be accompanied by an important reduction in the number of parking places currently existing in the Piazza Borromini. At the moment, this measure is being studied while initial actions are being taken to moderate traffic due to paving maintenance and maintenance of the Piazza. – The City Council.

The VEL2 Fleet

by O. Bernasconi



Hybrid cars are becoming more successful. Technology allows fuel savings ranging from 20 to 40%, thanks to the electric engine helping classic petrol propulsion. And all this without the driver even having to notice it. The performance is optimum. The managers of Cerbios-Pharma SA in Barbengo/Lugano can confirm this, as, since 2001, they have been driving a first generation hybrid Toyota Prius.

Cerbio-Pharma SA is a Swiss company founded in 1994. It has had more than 20 years of experience in research, development and manufacturing of active ingredients of the highest quality for the pharmaceutical industry.

Since a healthy environment is the basis for human health, Cerbios-Pharma conceives and realizes its products in strict conformity to the maximum requirements of environmental protection. From this perspective, its managers had in 2001 already bought a car offering the performance of a medium range limousine, with consumption levels of an economy car. Up until now it has already been driven 45'000 km, giving immense satisfaction to the lucky driver.

This Toyota Prius is the mother of the new model which, in 2005, has proved to be, from the ecological and technological point of view, the most avant-garde car in the world. It was elected "Car of the year for 2005" by the specialized European press. The same thing happened in the United States in 2004 and, also in that year, it won the coveted Engine of the Year award.

The Hybrid Synergy Drive HSD technology of the Prius II car is an ingenious marriage between the Toyota 1.5 l modern fuel engine and a powerful 50 KW electric engine. This union allows a consumption of only 4.3 liters every 100 km, less than a normal medium-sized fuel engine.

We are in a Synergy

by W. Herger, secretary ATA - SI



VEL2 and ATA share the same interest in ecological vehicles—both electric vehicles and low consumption, hybrid or natural gas vehicles. Each year, the association (which is, in a way, the environmentalist association competing with TCS and ACS), publishes its "List of cars and the environment", which classifies more than 500 car models according to their consumption level, polluting emissions, carbon dioxide emission, the impact of these on the environment, and noise pollution. In the top three places this year are Toyota Prius 1.5 hybrid, Daihatsu Cuore Eco Top and Opel Corsa 1.0 ECO Twinport Easytronic. It was on this occasion that the synergy with VEL2 was created. VEL2 contributes to the list distribution and marks the VEL vehicles. The publication can be requested from VEL2 or directly from the ATA (casella postale 1084, 6501 Bellinzona, ph. 091 826 40 88, e.mail wherger@weshuttle.ch). Unfortunately, this year, due to costs, ATA has had to stop publishing its "list" in Italian. It is available in French and German, which in any case does not make it overly difficult to understand the charts. According to ATA, the event of the year on the market of cars less harmful for the environment was the high-powered campaign led by Ford Switzerland: practically all its car models will soon be available in a "BiFuel" version, running with fuel or natural gas. Natural gas and gas from composting processes are not only less harmful for the environment than fuel, but they are also cheaper. It will become easier and easier to resort to natural gas as fuel, when an adequate network of recharging stations exists (in Ticino, we are only at the beginning). The "List of cars and the environment" is also available on the internet at www.ecomobiliste.ch or www.autoumweltliste.ch.

Fill-up with Energy to...

... Marco Castano!

by A. Rota - Biadici

For this edition, Fill-up with Energy goes to Marco Castano, professor of Science and Geography at the Secondary School in Barbengo, who is contributing with enthusiasm and conviction with VEL2 Project towards the actualization of the didactic program "Learning about Mobility" (A scuola di mobilità).

Thank you Marco for your ability and precious and unceasing contribution!



News Briefs

by A. Rota - Biadici

RiParTI is Completed

For two months, the new management system for the RiParTI public recharging stations has been fully operating throughout the entire area of Canton Ticino. We would like to remind those who have still not done so, and need to use to public electric vehicles recharging stations, that they can always ask for the form to request the key and 2005 sticker by contacting InfoVEL Mendrisio.

Natural Gas in Ticino

On June 2005, Ticino's first natural gas filling station will be inaugurated in Bioggio. In the rest of Switzerland, there are about sixty of this type of filling stations, which help to reduce polluting emissions.

More than 2300 VELs, since July 2001

The number of new efficient vehicles registered in 2004 reached 5% of the car market share in Ticino. Since the beginning of the VEL2 Project in July 2001, more than 2,300 efficient vehicles have been registered with the benefit of purchase contribution.

Due to the imminent end to the planning stage for the promotion, called VEL2, and the success met during these years, the financial contribution budget assigned for the purchase has been exhausted. From now on we will not be able to make any new promises for contribution.

Impressum

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