



Action 7

After Life Communication Plan

Città Metropolitana di Torino

Project partners



**Patrimonio
s.r.l.**



With the contribution of



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1. Foreword: the project

In Italy, in 2013 approximately 320 thousand tons end-of-life tyres were produced. Out of these, approx. 106,5k tons were recovered as rubber, 30k tons as steel, 95 tons as textiles. As a whole in the country 57% is used to recover energy, 43% to recover materials (*source "Italia del riciclo 2014 (re cycling in Italy 2014)" - Fondazione Sviluppo Sostenibile*). Through mechanical applications the components can be separated: steel, textile fibres and rubber can be used for the production of grains and rubber powder. The use of granulated rubber, or rubber from ELTs, as an additive in road pavings is an interesting alternative for the re-use of exhausted tyres.

For the Metropolitan City of Turin Administration, the topic of bitumen modified with rubber dust is not new: since 2008 a complex and well-structured research has been launched, commissioned by the Polytechnic University of Turin. The research is part of a broader program aiming at promoting the modified bitumen also with regard to the purchasing of green areas by public bodies.

Specific goals and actions of the Project

The project “Tyrec4Life” capitalizes this experience and aims at developing and implementing innovative technologies to expand the use of the discarded tire dust in road paving, focussing mainly on those solutions that provide an optimal balance in meeting technical, economic and environmental requirements.

The project has four specific objectives:

- Validation of open-graded, controlled texture bituminous mixtures.
- Assessment of the potential use of lower-quality or recycled aggregates
- Developing solutions for reducing energy consumption and emissions.
- Preliminary implementation of dry technology

In order to achieve these goals, surveys are conducted both in laboratory and in full-scale, adopting a multi-disciplinary approach which, inter alia, is also leading to the development of an innovative Life Cycle and Risk Assessment Method for evaluating the impact of different technologies on workers, users and the environment.

The partners of the Project

- Metropolitan City of Turin - leader
- Polytechnic University of Turin - associated beneficiary
- Patrimonio Città di Settimo Torinese Srl - associated beneficiary
- Fiat S.C.p.A Research Centre (CRF) - associated beneficiary
- Brillada Vittorio & C Snc - associated beneficiary
- CEIPIEMONTE S.c.p.a. - associated beneficiary
- ECOPNEUS - co-financier



2. Results achieved

2.1 Application of LCA (Life Cycle Assessment)

The ELV (End of Life Vehicles) and ELT (End of Life Tyres) management systems in use in Italy and other countries (European and non-European) were investigated in light of the current laws and directives. ELT recycling and energy recovery technologies were analysed and compared. Features of the technologies were determined by analysing the available literature and in the course of numerous technical visits to plants located in Italy.

2.2 Construction of the first plant in Italy for the production of hot dry technology conglomerates.

The system set up by Brillada Vittorio in their facilities in Borgaro Torinese is the second in Italy dedicated to these technologies.

2.3 Asphalting with different mixtures using wet and dry technologies

- Paving of a stretch approximately 1 km long on Provincial Road 503 Baio Dora, in the town of Borgofranco di Ivrea (wet - gap-graded technology).
- Paving of a stretch approximately 1 km long on Provincial Road 53 in the town of San Giorgio Canavese (wet - dense-graded technology).
- Paving of two separate stretches on a local road (approximately 2 km long) in the town of Settimo Torinese (wet - dense-graded technology and wet - gap-graded technology). In addition to the use of the tested bituminous mixtures, the latter is particularly interesting because it was carried out on a very damaged road, this situation being extremely common on our roads.
- Paving of approximately 3300 square metres of paving in the town of Borgaro Torinese (where the Brillada Vittorio & C. plant is located) (dry technology).



2.4 Construction of an innovative Life Cycle Risk Assessment (LCRA),

focused on evaluating the potential impacts on the environment and health of workers determined by the use of road construction and paving maintenance techniques in which ELT powder is used. With regards to Risk Analysis(RA), a first comparison between the various examined technologies was performed during the previous studies focusing on HQ (Hazard Quotient) and on IELCR (Individual Excess Life Cancer Risk) parameters.

3. Former dissemination and communication

The general concept that shaped dissemination and communication during the implementation period was to make the innovative technological solutions more interesting for the market. The production of modified asphalts benefits from academic and applied research, and addresses in the first place public administrators and politicians with the aim of raising their attention towards this user-friendly application. The main target group is advised about the possibility to make use of more environmentally friendly solutions for asphalts and road paving. The most important feature is to make sure that the results achieved are presented effectively and are withheld by the target groups. Administrators must be aware that they have the power to include in their actions the use of modified asphalt. The most important topics about this action are :

- Green procurement
- Information
- Addressing producers more easily
- Awareness about the whole chain of ELT
- Information about the presence of tyres recycling companies
- Research
- Citizens are made aware of the possibility to trigger positive behaviours



4. Results achieved by the dissemination and communication activities

Below we provide a brief overview of the manifold communication activities carried out by the project throughout the implementation.

4.1 Project Conferences

a) Turin, December 13th 2011 - Kick off conference: presentation of the project.

The meeting was attended by FISE-UNITE, ECOPNEUS, project partners, and several other companies operating in the discarded tire dust and bitumen mixture production sectors. In this occasion it was been possible to link with the ETRA Association and to start a networking group. Later there were the participation of our technicians to two important ETRA technical conferences in Bruxelles and Venice and also creating links with other similar projects

b) Turin, March 27th 2013 - Conference “TYREC4LIFE: Innovative technologies, ecologically sustainable for road pavings

The seminar was held to present the performance of the project Tyrec4life, after about a year of work. Additionally, Mr Jean Philippe Aliapur and Mr Jean-Pierre Taverne of ETRMA-European Tyre & Rubber Manufacturers' Association were present. The seminar was also an opportunity to present the project "S_LIFE", recovery and promotion of recycling of components of end-of-life vehicles.

S_LIFE project intensifies the cooperation between European world-wide class clusters in order to help them to develop new scientific, economic and structural coherent greening solutions all along the value chain, will develop strategies and a Joint Action Plan to link, mobilize and coordinate regional resources with more focus on this challenge. The project will develop tools to assess the regional research potential, share and disseminate best practices through inter-regional joint programs and suggest appropriate financial support.

(Photo gallery at <http://bit.ly/1nVzd7Y>)





**c) Turin, September 18th 2015 –
Conference “PNEUMATICI IN POLVERE – FROM TYRES TO RUBBER”**

The final conference was held on September 18, 2015. The event was subdivided into two parts: the first, involving the technical presentation of the results by the project partners; and the second, a round table discussion with the participation of a qualified panel of several people involved in the outcome of the project in various ways. This occasion was very fruitful not only because it succeeded in bringing together the various stakeholder, but also because it created the conditions to explore the potential and problems presented by the alternative use of scrap tires and to create various, interesting link between the participants.



d) Conferences for Decision Makers: March 27th 2013 and September 18th 2015

The first conference was held together with the project conference of 27th March 2013 and the second with the Final Project Conference: Mayors and Deputy Mayors in charge of mobility were invited, from Municipalities within the Province of Torino. The objective was to involve and to create link between the highest number of Decision Makers at Italian level: with respect to this ANCI – National Italian Association of Municipalities – which groups over 8.000 municipalities and Metropolitan Cities – has been deemed as an appropriate partner for the organisation of the conference.

e) Crumb Rubber Manufacturers' workshop

This was combined in one event on September 18, 2015. During the round table discussion there was an exchange among the different players involved in the scrap tire industry in various ways: from scrap tire collectors, to those who recover/transform these tires, to the final users, to representatives of local communities and research institutes, as well as, naturally, national politicians.

4.2 Brochure

In English and Italian, produced in 6.000 copies. It is a tri-fold brochure with an inside pocket where 19 removable fiches are enclosed. The fiches were produced as long as the project progressed, in order to be constantly updated.

4.3 Layman's report

A brochure summarizing effectively and concisely the project's implementation phases, its objectives, its results and its expected impact. A 6-page document in English and Italian, produced in 1.000 copies, distributed mostly during the conference held in September 2015.

4.4 Website

The Coordinating Beneficiary has developed a section of its institutional web site dedicated to the project - <http://bit.ly/1LejVk7> (on the internet site www.provincia.torino.gov.it) e <http://bit.ly/1O1pXVh> (on the internet site www.cittametropolitana.torino.it). This section has been used as a visibility and dissemination tool since the first months of project implementation. Moreover, to give more visibility to Tyrec4life, the Coordinating Beneficiary decided to open a new web domain: www.tyrec4life.eu. From now on, all project activities will be disseminated throughout the dedicated website. Special attention was paid to the section “Eventi e news” (“News and Events”) containing both information directly related to the project and general information on the issue of ELT sand their recycling. CRF also has published a page dedicated to Tyrec4life in the FIAT Group website (www.carecycling.fiat.com) and in in the 2014 FCA Sustainable Report (<http://2014sustainabilityreport.fcagroup.com>).

From the end of 2011 to the end of January 2016, the website was accessed over 4,800 times (Unique page-views using Google Analytics). The website analysis shows that the overwhelming majority of visitors comes from Italy and consults the pages in Italian. The pages in Italian are also consulted by visitors accessing the site from abroad.



4.5 Road Panels displaying the project's activity

In order to communicate the project, also at events or conventions, some notice boards have been created. The purpose was of providing adequate visibility to the project during conferences and events. The following products were realised :

- 2 roll-ups containing general information and the key information regarding the project
- 1 enormous panel (mt 5 x mt 4) in the main offices of the Metropolitan City of Turin
- notice reporting the results and technical evaluations of the experiments

IARC2015 (Berlin, March 25-27, 2015)

22nd International Conference (Brussels, March 25-27, 2015)

6th International Conference "Bituminous Mixtures and Pavements"
(Thessaloniki , June 10-12, 2015)

Also some road signs were placed in February 2016.



4.6 Publications – Participation in fairs and congresses

1) Publications

The list of the scientific publications related to specific aspects of the project is published on the Final Report, part 6.8.2, and in ANNEX 06.

2) Participation in fairs and congresses

The list of the scientific publications related to specific aspects of the project is published on the Final Report, part 6.7, and ANNEX 08.

4.7 Press releases

The Communication Unit of the Metropolitan City has issued a number of press releases addressed to the mailing list comprising newspapers and journals. In the Final Report , “Annex 7 – Dissemination” it’s possible to find:

- List of press releases – Provincia di Torino and Città Metropolitana di Torino
- Cronache da Palazzo Cisterna (magazine of Provincia di Torino and Città Metropolitana di Torino)
- List of press articles and newsletter
- A publication of Italian Environment Ministry “IL CAPITALE DI ESPERIENZE DEI PROGETTI LIFE+ AMBIENTE ITALIANI. Buone pratiche per i territori delle Regioni dell’obiettivo Convergenza” (Capitalising the experience of the Italian Life+ Projects: good practices for the regions of the “Convergence” objective)
- Facebook and Twitter post
- Youtube footage

4.8 Networking/ Exchange with other projects

a) Turin, March 27th 2013 - Conference “TYREC4LIFE: Innovative technologies, ecologically sustainable for road pavings

Approximately 60 people attended the event, including a group of trainees participating in an exchange programme with the Public Administrations of Brazil and Sub-Saharan Africa.

This project conference was organized in conjunction with the visit to Turin of a delegation of technicians participating in an exchange between the Province of Turin and the public administrations of Brazil and Sub-Saharan Africa. Therefore, it was also an opportunity to disseminate objectives, methodologies, and initial results in an extra-European environment. The project raised such great interest, particularly among the Brazilian technicians, that during the final conference organized in Brasilia in April 2013, within the work of the “II Encontro dos Municípios com o desenvolvimento sustentável”, in which the project coordinator Agata



Fortunato also participated, a follow-up on Tyrec4life was explicitly requested (<http://bit.ly/1Lemp25>).

b) Turin, October 30th 2014 - FLEX & THE CITY. “Products and Applications In Rubber Recycled For Roads, structures for use in urban planning and Transports”

In this occasion it was been possible to link with the ETRA Association and to start a networking group. Later there were the participation of our technicians to two important ETRA technical conferences in Bruxelles and Venice and also creating links with other similar projects.

c) May 20th 2015: hosting a delegation from Myanmar

The Metropolitan City of Turin has hosted a Myanmar delegation of Myanmar technicians in the frame work of the European cooperation project “Environmental protection and sustainable development: building local capacities on solid waste management in Myanmar”. this action is led by the City of Turin and its partners are the City of Yangon (YCDC – Yangon City Development Committee), the non-profit association Ithaca and the NGO CESVI. Objective of the project i sto improve the living standards and the environmental care in the area of greater Yangon and in Myanmar through exchange of good practices in the area of Solid Waste Management.

On May 20, 2015 the first half of the day was dedicated to the presentation of the project Tyrec4life and to the visit to the research laboratories of the Polytechnical University of Turin. In the afternoon the delegation had the chance to see first-hand the chain of recovery of rubber from ELTs: first a visit to the plants of the company “Tritogom”, specialized in reduction of tyres to rubber powder; then the visit to “BraServizi”, a company that collects and separates waste on behalf of local authorities in the area of Bra (south of Turin).

This gave the opportunity to consolidate operational ties among the partners involved and the local authorities that hosted the delegation (namely the City of Turin and the Metropolitan City of Turin). Myanmar guests appreciated the visit a lot and found it extremely interesting to review the whole chain of recovery of tyres until the very final reuse for multiple purposes.

The City of Yangon, later, sent a letter to thank for this very visit and expressed their intention to try and replicate this in their own country.



d) May 29th 2015 – the green buildings of the Metropolitan City of Turin

The Metropolitan City of Turin has presented to a group of American students who attend a course run jointly by the Polytechnical University of Turin and by the University of Maryland, its most recent achievements in the field of green buildings, comprising also the ringroad stretch of



Venaria and Borgaro that was paved with asphalt obtained via ELT rubber powder. The seminar was complemented by guided tour to these works and to the visit of the offices of the Metropolitan City of Turin in Corso Inghilterra..

5) November 5th 2015 - Recycle: the challenge in the building sector– Ecomondo

At the fair “Ecomondo” Legambiente presented the first report of the observatory “Recycle” “thanks to the use of recycled material it is possible to close at least 100 quarries and reduce environmental impact: lower consumption of water, of fossil fuels, lower emission of green house gases”. Among the panelists there was also Ms Agata Fortunato from the Metropolitan City of Turin. The interview shown in the footage linked below focuses on the main features of Tyrec4Life are shown

<https://www.youtube.com/watch?v=QYVYErkdNrw>



5. After-life communication plan

This activity is under the responsibility of the “Communication Unit” of the Città Metropolitana di Torino.

Aim of this activity is to make sure that the results achieved by the project are capitalized and further disseminated. All the partners are aware that the basic issues of the project require further commitment and deserve more and more attention from the stakeholders.

To do so there is a number of activities that capture the dissemination strategy already implemented and want to make the most of the contacts / communication channels already experimented.

A very clear pillar of this strategy is given by the acknowledgment given by the Italian Ministry of Environment: further pieces of the paving works already done have been financed, and this confirms the value of the work done. The whole communication strategy can therefore rely on



this meaningful recognition and further broadening of the scope of the dissemination activity is to be expected.

Here we provide the general data of the communication strategy; after this five fiches present the five projects that shall accompany the communication strategy post-Tyrec4Life until 2019.

5.1 General objective

Ensure sustainability of the project result through an appropriate communication and dissemination strategy that shall serve as a trait-d'union towards for further research, awareness raising among administrators, inclusion of the results achieved in green procurement rules.

5.2 Duration

From 2016 to 2019

5.3 Target group

- Decision makers : Local administrators, Politicians
- Researchers, Technicians
- Citizens , Association
- Private businesses

5.4 Quantifiable indicators

In terms of target groups: they are identified in the project fiches below

5.5 Activities (sub-projects)

The After LIFE dissemination and communication activities will be animated by four main lines of action:

- Diffusion of results and further developments of Tyrec4Life as wider as possible;
- Maintenance and strengthening of the relations with networks and projects communities at national ad European level particularly with those ones which have established collaboration with Tyrec4Life to boost its further extension;
- maintenance and widening of relations with scientific and developers' community, with the view to create new opportunities for the platform's use and to foster the research of new innovative solutions;
- institutionalization strengthening of the Tyrec4Life approach, by widening its impact area.



The actions that we mean to undertake to ensure the dissemination of the results, export and replicate them in other contexts include, together with the typical information activities, also other activities having a more specifically operational nature.

As a matter of fact the partnership believes that a project like Tyrec4Life can more profitably implement dissemination activities directly in the field, e.g. using modified asphalts to pave new roads or refurbish existing ones. Stakeholders – first of all public administrators, the project's main target group - have thus the chance to see with their own eyes the technical, environmental and profit margins that stem from these alternative pavings.

Dissemination will surely continue with more consolidated initiatives such as seminars, technical meetings, publications, constant update of the website, search for new partnerships and consolidation of the current ones.

In the next pages we present the basic five projects that form the post-project dissemination strategy. The common thread of these actions is to keep interest of stakeholders alive towards the results of the project, and include the main pillars of the results into public procurement, research, lobbying and advocacy, awareness raising targeted at citizens too.

The flow of information will take place through the exploitation of existing initiatives and conferences; stakeholders will be informed through manifold channels about the possibilities that reside within the re-use of tyres powder rubber.

Core of the strategy is the continuation of the project, financed by the Italian Ministry of Environment.



Project number one

TITLE: " MINISTRY OF THE ENVIRONMENT, THE GUARDIANSHIP OF THE TERRITORY AND THE SEA: PUBLIC CALL FOR THE ATTRIBUTION OF ECONOMIC CONTRIBUTIONS TO PROJECTS OF REDUCTION AND PREVENTION OF REFUSALS"	
Start / End date	2015 October – 2016 July
Objective and Target Group	<p>To carry out additional and functional actions for projects of reduction and prevention of refusals, financed partly from the UE already</p> <p>Target : Italian Local Authorities</p>
Contracting Authority	Italian Ministry of Environment
Activity	<p>Pursuance and implementation of the Project Tyrec4Life, realization of new roads asphalted with modified bitumen. Diffusion of the results achieved with Tyrec4Life through the practical demonstration.</p> <p>The financing of the EU covers complementary paving actions to assess the use of bituminous conglomerate in two stretches of roads,</p>
Result	<ul style="list-style-type: none"> • implementation of approximately 4000 mqs of roads, asphalted with modified bitumen • implementation of approximately 2500 mqs of roads, asphalted with traditional bitumen
Budget	<p>167.743,80 euro.</p> <p>Funds awarded by the Italian Ministry for Environment. Budget allocated to the prosecution of projects or programmes co-financed by the European Union that pursue the objective of reducing and preventing waste. Funds are awarded to public and private entities.</p> <p>Costs are covered 100% by the financing of the Ministry.</p> <p>The Italian Ministry of Environment deemed it strategic to promote the financing of this action, given the significance of the results achieved, and the interest in assessing further use and test of bitumen.</p> <p>This action provides important dissemination inputs :</p> <ul style="list-style-type: none"> • it reinforces the « see-with-your-eyes » strategy • it can count on the interest of the Ministry for the technology explored in the project • the report made by the Ministry will give publicity to this action and to the work done through Tyrec4Life • local authorities and public actors interested in green procurement will find it useful to refer to Tyrec4Life for environmentally sustainable paving works



Project number two

TITLE: INVOLVEMENT OF ANCI TO ENSURE IMPACT OF PROJECT RESULTS	
Start / End date	Next four years
Objective and Target Group	To keep the results of the Project Tyrec4Life in focus Local Italian authorities
Activity	To keep in touch with ANCI –à Italian National Association of Local Authorities (Municipalities) (above all from Metropolitan City of Turin)
Result	<p>The local authorities will be informed about the possibility of using the e-procurement. The saved money, coming from the public auction for the realisation of traditional roads, can will be used for making innovative road pavements using modified bitumens</p> <p>The action will spread over a 4 –year time period and will count on the leverage effect triggered by the action described above (project 1) and on the lobbying / advocacy work that will be done by the actors</p>
Budget	<p>20.000 € (travel to/from Rome, staff costs)</p> <p>This project will depend on the political priority given to the green procurement issues by the direct target group.</p>

Project number three

TITLE: UPDATE AND MONITORING OF PROJECT WEB TOOLS	
Start / End date	Until 2019
Objective and Target Group	To keep the results of the Project Tyrec4Life in focus , to furnish news on the activities in progress (also on the Project financed by Ministry of Environment), to create and to develop the network General public, stakeholder
Activity	<p>Revision, implementation and monitoring of the visits to the WEB site, monitoring of the newsletter service, implementation of the mailing lists.</p> <p>This action consists in keeping alive the webpage created for the project Tyrec4Life.</p> <p>Following the recommendations of the contracting authority and the general restyling of the website after the former “Province” was replaced by the “Metropolitan City” Authority, the website of Tyrec4Life was given new contents, a more enticing visual identity and the section dedicated to the news and updates was given further inputs.</p> <p>The bunch of content that has been gathered shall not be dispersed and will be enriched in the future. This is also worth being done because the</p>



	partnership realized that the website was visited by many actors who wanted to have some update on the current situation concerning the value chain of exhausted tyres
Result	5.000 contacts including Youtube footage
Budget	10.000 (staff)

Project number four

TITLE: DISSEMINATION ACTIONS BY THE PARTNERS, PARTICIPATION AT THEMATIC LECTURES , CONVOCAION OF METROPOLITAN TECHNICAL TABLES	
Start / End date	January 2016 – Until 2019
Objective and Target Group	Decision makers, Local administrators, Politicians Researchers, Technicians Citizens , Association Private businesses
Activity	Participation to the most important National and International Lectures, Seminars and Conferences like e.g. : ECOMONDO, IARC, International Conference "Bituminous Mixtures and Pavements, Sardinia International Waste Management and Landfill Symposium (three times for year at least) . Creation and convocation of three Metropolitan technical tables for year at least
Result	Participation of our partners to the most important technical, academic and scientific appointments, sharing of the experience matured during the project, creation of connections and network
Budget	10.000 (mainly staff)

Project number five

TITLE: TYREC4LIFE NEWSLETTER	
Start / End date	April 2016 – until 2019
Objective and Target Group	To reach and to maintain alive the links with the stakeholders, to spread the news related to the various activities, to create network and to implement the mailing lists. Mailing list made available by the partners / stakeholders that participated in the conferences, plus target groups directly addressed by each partner in their activity (local authorities, businesses, universities, research centres and so on)



Activity	<p>To produce three news letters every year, containing news and updatings about the activities that have been conducted by the project partners.</p> <p>All the partners will be asked to provide articles and information of tyre recycling and related topics. The result will be an update on what every partner component does in this field, and the interesting part will be that each will contribute according to his own working perspective. Environment, value chain, research, recycling, local economic development – all of these issues will be touched by the contributions of the partners.</p>
Result	3 issues per year until 2019
Budget	Staff costs, mostly



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