Sustainable vinyl at the Allianz Riviera Stadium

Marco Punzi, architect and director at Wilmotte & Associates, was invited to the Vinyl Sustainability Forum in Cannes, on April 30th 2015. He had the opportunity to highlight the choices made for the construction of the Allianz Riviera Stadium - which relies on solar energy and eco-materials like PVC to conform with the most rigorous standards of environmental and social responsibility.

The Allianz Riviera Stadium is a multisport stadium in Nice, France, which opened on 22 September 2013. The stadium is mostly used for football matches. It has a capacity of 35,624 people. Construction started in 2011 and was completed two years later. The project was part of France's ultimately successful bid to host the UEFA Euro 2016.

The Allianz Riviera Stadium conforms to the most rigorous standards of environmental and social responsibility. It relies on solar energy and eco-materials, and the management is committed both to recycling and to providing job opportunities and training in sustainable development to local workers.

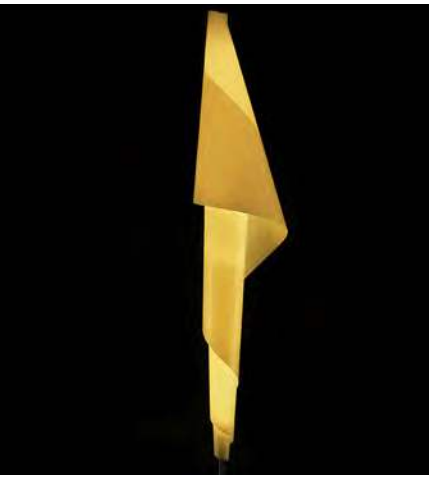
Among other things, the Allianz Riviera Stadium has acknowledged the sustainable advantages of PVC and has made extensive use of this wonderful material in the roof of the stadium. While maintaining a financially-responsible and low-carbon approach to design, the architects were able to develop a complex undulating space-frame that combines optimal lightness with solidity. It is made up of a tri-dimensional wood-steel frame covered with a PVC and ETFE tensile fabric, and is equipped with photovoltaic panels.

Marco Punzi, architect and director at Wilmotte & Associates with over 20 years of experience in Italy, France and China, was responsible for the conception and building of the Allianz Riviera Stadium.

Marco was invited to the Vinyl Sustainability Forum in Cannes, where he had the opportunity to highlight the choices made for the construction of the stadium. He notably explained why PVC was the material of choice for such demanding infrastructure.

View the interview here…
http://vinylplus.eu/resources/videos

Project: Allianz Riviera Stadium
Location: Nice, France
Designer: Wilmotte & Associates
Picture credits: Wilmotte & Associates
Website: www.wilmotte.com



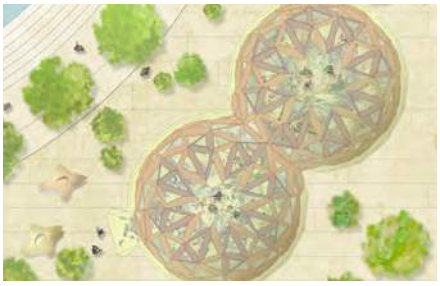
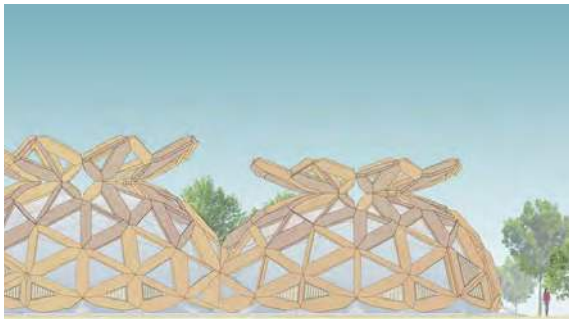
Costura Lamp

Costura is a family of luminaries designed by Spanish designer Josep Aregall for Metalarte. It is composed of two table lamps, and a floor lamp. Every lamp is finished in black lacquered metal and

Looking to the future without losing sight of the achievements of the past, and once again celebrating the best of Spanish design, Metalarte recently introduced a new flagship version of the lamp.

Around the flagpole of this iconic design, a translucent sheet undulates gracefully, which now serves to support any flag or banner: countries, communities, cities, organisations, corporations, associations and clubs. It never wrinkles and, what's more, it provides light. Costura is perfect for the newsroom, for institutional offices, for sports clubs, for the hall of a hotel or just to display with pride.

Project: Costura Lamp
Location: Milan, Italy
Designer: Josep Aregall, Valencia, Spain
Technical info: PVC sheet
Picture credits: Metalarte
Website: www.metalarte.com


COPAGRI Dome

COPAGRI is a confederation of agricultural producers that brings together hundreds of Italian farmers. During the Expo, they showcase their approach to the use of natural food products, all linked to the Italian tradition, through a market, a hall for cooking demonstrations and two spaces for pizza and ice cream tasting, made with 100% organic products.

The design started from the observation of Italian landscapes, both natural and man-made. The dome is conceived as a variation of the vast surrounding public space: for this reason, the structures present clear permeability and full congruence with the setting. The open nature of the structure is materialised in a reduced use of mechanical systems, in favour of natural lighting and natural ventilation.

The structure is composed of a big, three-dimensional grid that gradually transforms into woven branches, as it grows to the open top of the dome. The structural elements become architectural ones, designing both the internal and the external facades as tree branches. The empty spots of the grid enhance air and light permeability, while providing visual continuity between the outside and inside.

The double dome is a prefabricated structure made of spruce glulam, with zinc-coated steel joints. Numerical control machines cut the structural elements, and they can be easily assembled and dismantled in agreement with COPAGRI's need of reuse them after the Expo, as expressed by the project competition requirements. The upper part of the domes, called "the hat", hosts the required services both for the building itself and for the Lake Arena, consisting of lights, loudspeakers, antennas, and more.

An internal PVC sheet, suspended from the vertexes of the structure, covering the openings and avoiding water penetration, provides water resistance. The PVC seam follows the structural grid.

White translucent, pressurised PVC cushions cover the internal space in correspondence with the central oculus: those cushions are not linked to the internal PVC sheet, guaranteeing natural ventilation through a stack effect. Natural ventilation is indeed essential: in addition to the upper openings, all the perimeter of the dome is covered with a netted fabric, whose zigzag pattern follows the structural grid and ensures ventilation.

Project: COPAGRI Dome
Location: Milan, Italy
Architect: Miralles Tagliabue EMBT, Barcelona, Spain
Technical info: PVC sheet
Picture credits: Miralles Tagliabue EMBT
Website: www.expo2015.org

Hide

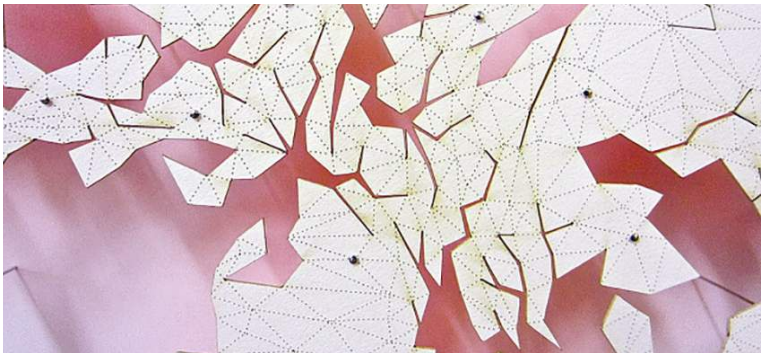
San Diego-based artist David Adey makes provocative and often dramatic works that explore the seductiveness of images to startling effect.

Adey has worked with images of skin for years, cutting them out, arranging them in new ways and exploring what it means to take a 2D image and make it 3D.

"Hide" is the geometry of Adey's own body, flattened, printed, laser cut and assembled in one piece then pinned in place like delicate paper taxidermy. It is an inventive take on a self-portrait, in which Adey explores a different method of deconstructing and flattening the human form.

Beginning with a three-dimensional scan of his entire body, he creates a triangulated three-dimensional model of himself comprised of over 75,000 triangles. From there, the model is unfolded and flattened to form a two-dimensional record of the entire surface of the artist's body, all in one piece, without overlaps. This two-dimensional apparition is then laser cut and framed in two adjacent PVC panels to create a diptych resembling a cross between a Dymaxion Map and a Rorschach test.

Connected to his laser-cut, mass media pinned images, Hide represents is the pinnacle of Adey's exploration of the skin and surface of the body.



Project: Hide
Location: La Jolla CA, USA
Designer: David Adey, San Diego, CA, USA
Technical info: PVC panels
Picture credits: Scott White Contemporary Art
Website: www.davidadey.com

German Pavilion

The German Pavilion translates the German field and meadow landscape into its architecture in a striking and surprising way: a building consisting of a gently sloping landscape level with a freely accessible surface and a thematic exhibition inside.

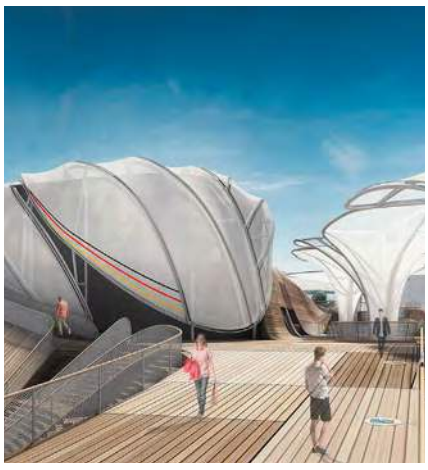
In this landscape, with clearly discernible fields, stylised plants grow as "idea seedlings" up from the exhibition to the exterior surface, creating a large, protective canopy. These are the connecting elements, dovetailing the exterior and interior, the architecture and the exhibition itself. They connect indoor and outdoor spaces, exhibition and architecture. Those trees are made of PVC/PES material at the top level, and ETFE in the bottom level. The organically flowing design language – floating leaves hovering over the landscape – creates a distinctive and unforgettable image.

The expressive membrane roofs in the shape of emerging plants, inspired in their construction and bionic design language by nature, represent one of the pavilion's key design elements.

The modern steel and PVC/PES membrane structure reduces the consumption of materials and makes for an extremely lightweight construction. The unusual, organic flowing lines express pioneering innovations inspired by nature.

Formally, the architecture is reminiscent of a "supplanted landscape" set in the pavilion's premises which gradually slopes upward to a height of 10 metres. The German Pavilion then applies the concept of stylised fields and meadows in great detail. The use of different native woods, in different grains and tones, creates a highly distinctive design. The fields and meadows evolve into a walk-through wooden deck. Wood is not only warm and inviting, it also attests to the deliberate use of renewable resources with a balanced CO_2 audit. The façade design consists of a horizontal lamellar structure. It follows the sloping landscape and façade openings, reminding viewers of horizontal earth strata. The façade is as simple as it is "intelligent". Its permeability and natural ventilation – achieved through a lamellar structure, are part of a simple, yet very effective, interior climate concept, which, in combination with energy-efficient technologies, ensures comfortable temperatures in all exhibition areas.

With its open and freely accessible landscape level, the German Pavilion doesn't feature explicitly prestigious architecture. Rather, it is a meeting place for fascinating encounters and exchanging ideas – clearly communicating "Fields of Ideas". The pavilion is welcoming and lively, uniquely reflecting Germany's attitude towards environmental protection, and communicates its messages with authenticity. With a multifaceted spectrum of inspiration, interaction and participation, visitors to the German Pavilion themselves become part of the large, vivid picture of Germany.



Project: German Pavilion
Location: Milan, Italy
Architects: David Adey, San Diego, CA, USA
Technical info: PVC/PES mesh and ETFE
Picture credits: B. Handke, SchmidHuber
Website: www.expo2015.org

Dotto Collection

Created by Studio Tools, Dotto Collection consists of PVC plumbing pipes turned into jars or pots with a plexiglas base.

Studio Tools is a project of self-production developed by ZP Studio, a Florence-based architecture and design office committed to creating ideas for exhibition and commercial spaces, along with corporate brand solutions and product design. The studio has been focusing recently on self-production through research in traditional and avant-garde techniques.

Dotto Collection consists of PVC plumbing pipes turned into jars or pots with a Plexiglas base.

All objects from Studio Tools have been manufactured with the collaboration of Tuscan craftsmen, and they narrate the valuable know-how and skills of small scale production Made in Italy. Through a design driven process, artisanal techniques are fostered by innovation and new technologies: traditional wood turning and PVC pipes are mixed with semi-finished materials directly deriving from industrial production.

Project: Dotto Collection
Design: ZP Studio, Florence, Italy
Producer: Studio Tools, Firenze,Italy
Technical info: PVC pipes
Picture credits: Studio Tools
Websites: www.zpstudiotools.it

Mexican Pavilion

Since its first participation in a Universal Exhibition (Philadelphia in 1876), Mexico has always delivered an impressive pavilion that captures the imagination. Architect Francisco López Guerra Almada, together with Jorge Vallejo and consulting biologist Juan Guzzy,

The fundamental theme of Expo Milano 2015 is sustainability, being as much a driving principle for feeding the world's population as a criteria for architectural design in terms of eco-friendly materials, ease of construction and dismantling, and fulfilling proposed programmes.

The Expo jury chose between the 39 proposals submitted, by evaluating the quality of the spaces, the form and the functionality of the architectural design, the speed and simplicity of construction and the environmental sustainability of the proposal. The Mexican Pavilion has an area of 1,910 square metres and it is set in a prime location at the intersection of the two main avenues.

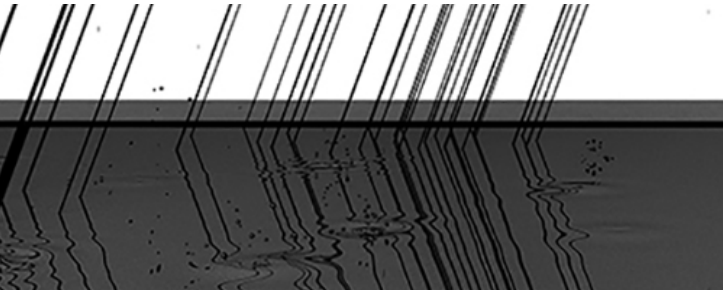
The interior offers an all-encompassing exhibition of typical products, edged by a stream of water that gives life to the gardens and takes visitors along spiral ramps to explore the gastronomic, ecological and cultural riches of Mexico. The frame is inspired by the shape of corn leaves.

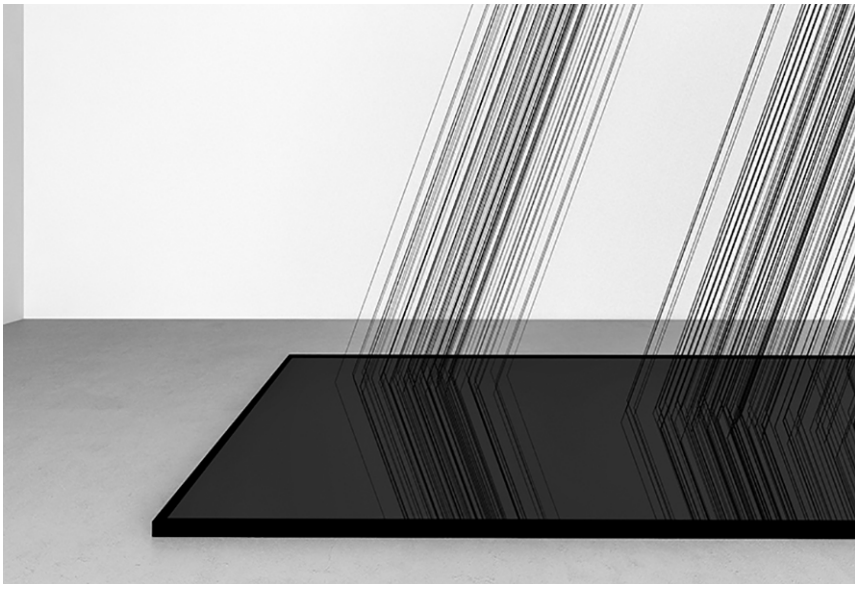
There are 19 leaves along the perimeter of the building, all different from each other, with variable height, from 12 to 17 metres. These leaves create a second skin and give dynamicity to the façade. The main structure of each element has been realised using round pipes, and it is covered with printed PVC/PES mesh. The layout of the ribs in the corn leaf has been adapted to each tridimensional shape, created by the architect. The image obtained for each leaf was then reproduced in real scale, subdividing the maximum lengths of the rolls of the material.

The two longitudinal façades of the inner structure have been designed as large double layer ETFE windows, fixed to an aluminum profile, to allow an amazing view from inside the building to the external leaves.

The inner court is enclosed within a lightweight cushion structure of three layers to allow natural lighting to the inner space of the pavilion by ensuring high thermal performance.

Project:Mexican Pavilion
Location: Milan, Italy
Architects: Francisco López Guerra Almada, Mexico City, Mexico
Technical info: PVC/PES mesh and ETFE
Picture credits: Pygmalion Karatzas
Website: www.expo2015.org





Flood

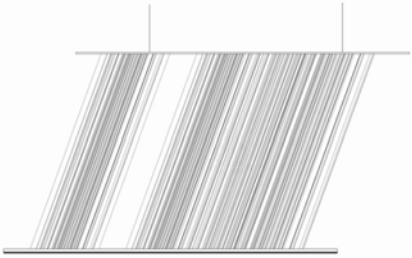
Alban Guého's Flood installation takes a critical stance on these extreme natural phenomena. It was selected for the 2015 Nuit Blanche Festival in Paris.

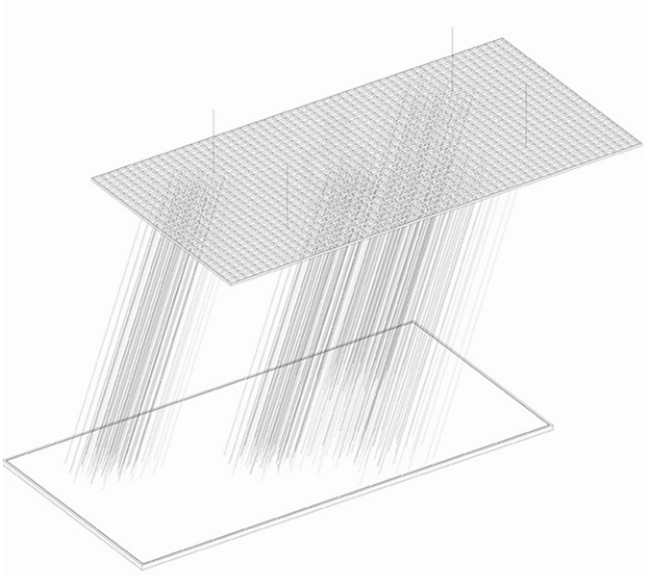
The theme of the new session of Nuit Blanche is the climate, echoing the COP 21 to be held in Paris in December 2015. In recent years many extreme natural phenomena took place in the world with an accelerating frequency. In history Paris has also experienced remarkable weather events including, in 1910, an exceptional flood that inundated much of the town and paralysed public transport. This phenomenon of heavy precipitation has remained extraordinary but current climate change is expected to increase its frequency over the years to come.

Deluge — flood — myths, are at the basis of some of the most widespread tales and generally, flood is a direct result of humans angering some form of supreme being(s). From this point of view, Flood serves as a subtle reminder of the fragility of our planet.

Alban Guého's installation is composed of two superimposed structures, placed opposite on the floor and ceiling. The two are connected by a series of PVC cables.

A black liquid, either oil or paint, will be pumped in a slow trickle through the cables representing the slow, unceasing degradation of natural elements and resources. As the audience wanders, weaves, and observes the rain-like piece, they will be forced to look head-on at the dim future humanity currently has in store.





Project: Flood
Location: Paris, France
Designer: Alban Guého, Paris, France
Technical info: PVC cables
Picture credits: Alban Guého
Website: www.albangueho.com

Kuwait Pavilion

The Kuwait Pavilion, designed by Italian architect Italo Rota, tells the story of a country surrounded by the sand of the desert and the saltwater of the sea, where potable water is a hidden treasure.

The pavilion shows how the Kuwaitis are making the desert more habitable by the use of education, technology, science and, where possible, sustainable energy to build a society that is modern, alive and ambitious – and therefore capable of contributing to global development and to feeding the world.

The architecture of the pavilion is inspired by the typical sailboat from Kuwait, the "Dhow" that is still in use in the Arabic Gulf, and by greenhouse shapes, with some reference to the agriculture system of Kuwait. The Pavilion covers app. 2.790 square metres and is situated at the north of Decumano.

The pavilion offers a fascinating view of the territory of Kuwait, its culture, its human and natural resources. It is the desert that welcomes visitors, who after a long promenade arrive at the event area where they are immersed in landscapes recreated by 360 degree projection.

From the canyon where the water plays with the rocks, you arrive in the heart of the pavilion, a huge glass model which recounts the history of the area. It is taking visitors on a tour inside its "small fortress" (this is the meaning of the Arabic word from which Kuwait takes its name), from the different types of desert to the sea that washes the shores. Its highly scenic elements embody principles of recouping and saving natural energies. Surrounded by hydroponics outside (tomatoes, strawberries, salads), the largest space, used for dining and refreshment, is coloured by the typical elements of the Arab souk and by a large central fire, allowing visitors to relax and enjoy the flavours of the Middle East.

Project: Mexican Pavilion
Location: Milan, Italy
Architects: Francisco López Guerra Almada, Mexico City, Mexico
Technical info: PVC/PES mesh and ETFE
Picture credits: Pygmalion Karatzas
Website: www.expo2015.org

Project: Weld Bag
Designer: Joris de Groot, Amsterdam, Netherlands
Producer: Dolfing Druten, Druten, Netherlands
Technical info: PVC fabric and leather
Picture credits: Rolf Hensel, JW Kaldenbach
Website: www.dolfing.nl

Weld Bag

Weld Bag, developed by young Dutch industrial designer Joris de Groot, adapts a fold normally used to make plastic shopping bags and PVC fabric welding, to create a line of products that includes a shopping tote, sports and beach bags, and a laptop briefcase.

As Joris explains: "Techniques, for construction and production, are my starting point. It's my interest in techniques that brought me to plunge myself into knotting and twining during the first years of my studies in Arnhem. The same interest is at the root of my project to use existing industrial techniques and unused industrial capacity to create new products."

Weld Bag is developed in collaboration with Dolfing Druten, a manufacturer of work clothes, rain gear and waterbeds, using high frequency welding.

The bag was recently exhibited at Milan Design Week as part of the design exhibition Workmates.

Cardo and Decumano

The canopy over the World Avenue at Expo is not merely a question of aesthetics but also the outcome of an in-depth study by the Ufficio di Piano (Planning Office) of Expo, working together with structural engineer Massimo Majowiecki under the supervision of the International Council of Architects.

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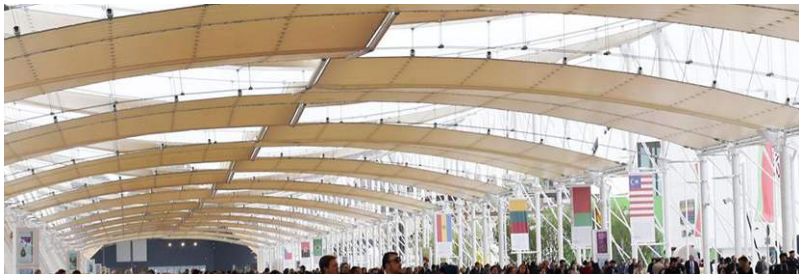
The canopy appears to float over the Decumanus (and also over the Cardo, the side paths, Piazza Italia and the West Gate, albeit with different characteristics). It is composed of a horizontal tensile structure system with counter-curving cables, a recyclable PVC canopy membrane, and vertical anchor posts. A series of openings along the path creates a chimney effect. Thanks to the orientation towards the Alps and the waterfalls near the service areas, this long shaded promenade is several degrees cooler than on the outside.

The structure consists of a suspension bridge styled with upper and lower cables connected by tensioned tie cables. The upper and lower cables are connected to the masts on each side, and the masts are in turn supported by tie-back cables connected to concrete foundations. Steel strut elements span between the adjacent lower cables and upper cables. This design provides a very stable structure which supports the PVC fabric membrane cladding.

Cardo and Decumano are the two main axes of the Expo Site with a total surface of 80,000 square metres. They are covered by a translucent tensioned fabric structure. The segmented lightweight structures provide comfortable shading and protection from rain. Based on the model of a Roman city, with a 1,500 metre long "Decumano" and a 350 metre long north-south axis "Cardo", this covered walkway is the link between country pavilions.



Project: Cardo and Decumano
Location: Milan, Italy
Architects: Architecture Massimo Majowiecki, Bologna, Italy
Technical info: PVC mesh and ETFE
Picture credits: Expo 2015, Italo Rota & Partners
Website: www.expo2015.org