



How to contribute to Urban Prosperity through Reuse of PVC

At the 4th edition of the Vinyl Sustainability Forum, organised by VinylPlus, the sustainable development programme of the European PVC industry, a duo of Danish architects presented their vision on how reuse of PVC building waste can contribute to efficient urban agriculture.

The renowned Danish architect Kaare Sølvsten and newly graduated architect Maja Sønderskov presented to the 130 participants from academia, government bodies, the UN, the European Commission, specifiers, designers, architects and all sectors of the PVC industry, their vision on how the PVC material can contribute to solving the challenges of future cities.

Today the earth is facing climatic challenges, which suggest a potential change of mindset, behaviour and consumerist patterns. The growing population and increasing urbanization put pressure on existing food production and supply. The Food and Agriculture Organization of the United Nations (FAO) encourages urban agriculture, which provides nowadays fresh food, generates employment, recycles urban wastes, creates green belts and strengthens cities' resilience to climate change ([www.fao.org/urban-](http://www.fao.org/urban-agriculture/en/)

[agriculture/en/](http://www.fao.org/urban-agriculture/en/)).

Kaare and Maja are convinced that growing systems for urban agriculture can easily be made from PVC building waste such as pipes, gutters, cable covers and roofing sheets. PVC's technical characteristics make the material a perfect choice for hydroponics, which is a water-based system where plants grow in a closed loop. This system saves both water and resources. The idea is simply to take advantage of the characteristics which are unique for PVC building applications. Indeed, end-of-life PVC building applications are light weight, water compatible, weather-proof, durable and readily available, and require low maintenance.

Maja Sønderskov highlights: "our project on sustainable urban agriculture can take place on different levels: private (*balcony, kitchen, and stairways*), municipal (*intensive farming*) and collective gardening. It presupposes a partnership between authorities, waste management department, housing associations, designers and architects, volunteers and local interest, and the local PVC industry. Everyone who wants to create a better future for our planet."



T-Boutique

Prague-based Studio Pha has designed the interior of the local T-Boutique, which is situated in the functionalist passage Broadway in a Prague street Na Příkopěch.

In the layout the designers have assumed the distinctive aspects of the authentic architecture, which they experimented with, to follow the present approach. The central motif is the authentic skylight, a sort of centrepiece of the complete space, which then geometrically follows a wooden slat framework. This structure offers the whole, otherwise broken area, a vivid and compact shape.

The personal slats are created of multiplex birch veneer and the white translucent ceiling is made with a white PVC membrane. The floor technique is squeegee-grade micro-topping in the colour anthracite. The interior is complemented by simple shapes to minimalist furniture.

Architects | **Studio Pha, Prague, Czech Republic**

Location | **Prague, Czech Republic**

Technical info | **PVC ceiling**

Picture credits | **Filip Šlapal**



Mamba Light

Established in 2002, Lagranja is a Spanish multidisciplinary design studio focusing its talent on the creation of interiors, products and ephemeral installations. Lagranja's attitude and creative edge, has led to collaborations with some of the most prestigious names in the industry, including designs for products and development of international projects and exhibits for cultural institutions.

Mamba is a new collection of table, wall and floor lamps designed for Valencia-based producer Metalarte. Mamba is a reading lamp which makes an impact thanks to its versatility and sobriety. With its minimal dimensions, it is capable of satisfying the user's needs for light

and harmony. Mamba consists of a metal hose covered with PVC which makes it possible to orient it in countless positions.

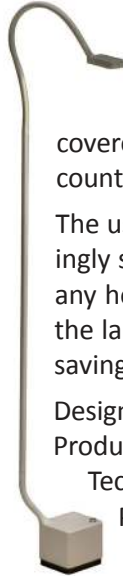
The use of LEDs as the light source, allows it to be surprisingly small, which makes Mamba a non-invasive object for any home environment. These same characteristics give the lamp an ecological aspect that translates into energy saving.

Designer | **Lagranja Design, Barcelona, Spain**

Producer | **Metalarte, Valencia, Spain**

Technical info | **PVC**

Picture credits | **Metalarte**





Roksanda Ilincic Resort SS16

Cubist-influenced shapes and contrasting colours pattern the garments in this new collection designed by London fashion brand Roksanda.

Known for its bold use of colour and geometric shapes, the brand, led by Serbia-born designer Roksanda Ilincic, has continued this approach for its Resort 2016 collection.

The outfits were unveiled earlier this week at Roksanda's flagship store on London's Mount Street, which opened last summer with an interior by architect David Adjaye that references elements of the brand's fashion designs.

Roksanda's range includes garments made of PVC and leather which are used to contrast the softer fabrics,



creating folded ribbon-like details as well as flat panels.

The blocky, geometric patterns are based on deconstructed shapes similar to those found in the early 20th-century Cubist art movement, made popular by artists Pablo Picasso and Georges Braque.

Designer | **Roksanda Ilincic, London, UK**

Producer | **Roksanda, London, UK**

Technical info | **PVC, leather, fabric**

Picture credits | **Roksanda**

Horticultural Spa & Apothecary Experience

English design studio Loop.pH, run by Rachel Wingfield and Mathias Gmachl, wanted to recreate the lost social spaces once provided by the communal bathhouse. Imagining a future society where serious water shortages are a reality, the studio replaced full immersion with a light, scented water-mist.

For these reasons, Loop.pH has designed an inflatable plastic dome, by London's River Thames, that will be pumped full of scented vapour to create a gathering space intended to replicate the atmosphere of a traditional bathhouse.

The studio cites the social aspects of the traditional teahouse and bathhouse, as well as American architect and theorist Buckminster Fuller's investigations into how future societies might deal with water shortages, as influences for the project.

Named the Horticultural Spa & Apothecary Experience, the installation consists of an inflatable PVC membrane, ballasted with two tonnes of steel scaffolding. Potted plants are set into the pockets of a latticed birch plywood arch that forms the entrance to the structure.

One of the technologies the studio worked with was aeroponics, a soilless method of cultivating plants where the roots are misted with nutrients inside an inflatable PVC membrane.

A slit in the plastic skin allows visitors to slip into the misty interior, where scented vapour produced by adding essential oils and plant extracts to water is pumped into the bubble-like dome.

The installation occupied a spot on the Thames River Path in Nine Elms, a fast-developing area of London by Battersea Power Station. It has been created for the London Architecture Festival – a month-long festival of temporary exhibitions, installations and events that takes place across the capital each June.

Architects | **Loop.pH, London, UK**

Location | **London, UK**

Technical info | **PVC membrane**

Picture credits | **Loop.pH**





Hydronaut

Hydronaut is a semi-permanent, demountable structure housing an armament of security staff at the northwest edge of Monash University's Caulfield campus. Occupying just five parking bays on the ground floor of an existing multi-deck car park, its sight lines include a local shopping plaza, Caulfield train station and Monash University's Campus Green, each window portal taking in a different aspect of the surrounding panorama. The new building provides a panopticonic point-of-presence in a location known for its security challenges.

Marked by prominent portals, the façade's mirrored circular windows accentuate a camera monocle motif. Inside, black-rimmed peephole portholes punctuate walls lined with reject, perforated-ply acoustic ceiling panels. Separate interior spaces are visually connected by bespoke joinery that float and truncate towards an armour-screened control counter at the bow.

A core aim of the project was to integrate product/infrastructure longevity strategies into work practices; however, rather than designing discrete long-life objects, the notion of longevity was considered from a multi-lifecycle

perspective – where waste from one lifecycle generates raw material for another, and so on. The aim being to reduce material consumption while maintaining flexibly designed artefacts and spatial environments.

To this end, and true to the project imperatives, the building's nine tensegrity exterior modules are reminiscent of lightweight, tent-like structures. They were constructed reusing a disparate range of domestic, commercial, industrial and construction waste – the adhoc nature of which required novel construction methods and material combinations.

Each module was hand crafted from waste PVC truck-side curtains stretched over tensioning frames made from unwanted exercise trampolines, discarded steel storage racks and reused stud framing. These assemblies were designed upfront for disassembly and further reuse.

Architects | **Studiobird + Mark Richardson, Armadale, Australia**

Location | **Melbourne, Australia**

Technical info | **PVC membrane**

Picture credits | **Peter Bennetts**

Dynamic Relaxation

SOMA (Seoul Olympic Museum of Art) is, along with its 95,940 m² size of Sculpture Park, located in the southeast of Seoul, a resting place for the public created to celebrate the fruits of the Seoul Olympics.

SOMA planned the outdoor installation project, which is called 'Project S' this year. They opened the design competition by inviting young architects and artists. HG-Architecture was invited to the competition and won at the final stage.

Seoul Olympic Park is a dynamic place for people, who enjoy walking and light exercise in the surrounding community and a place of relaxation for people who enjoy appreciating art and resting around the lake. Dynamic Relaxation is the public art for all which provides experiences of dynamics and relaxation at the same time.

Dynamic Relaxation is simply lying on the top of hill behind the museum. It is a topological surface which invites people and opens to the outside surrounded by nature. Also, the geometry of space reflects the topography of park landscape and the continuous curvature, which are the site-specific characters of the park. It is not only aesthetic sculptures but also a multi-purpose space for resting and

climbing, hanging and exercising for everyone.

The basic geometry started from a trefoil knot, which consists of three Möbius Strips between three strands of pipe. The pipes were twisted accurately and structured by triangular sections with transforming sizes and angles along the base geometry. All structures were modularised by 21 components and each one was fabricated and welded at the factory. The pre-assembled modules were finally assembled on site for two days, and then a total of 573m lengths of rope were installed to create the topological space. Finally, 367 triangular pieces of PVC vinyl were attached to the rope to provide UV protection under the structure.

The official exhibition of Dynamic Relaxation lasted until October 2015, but it will stay at the site with people and nature permanently.

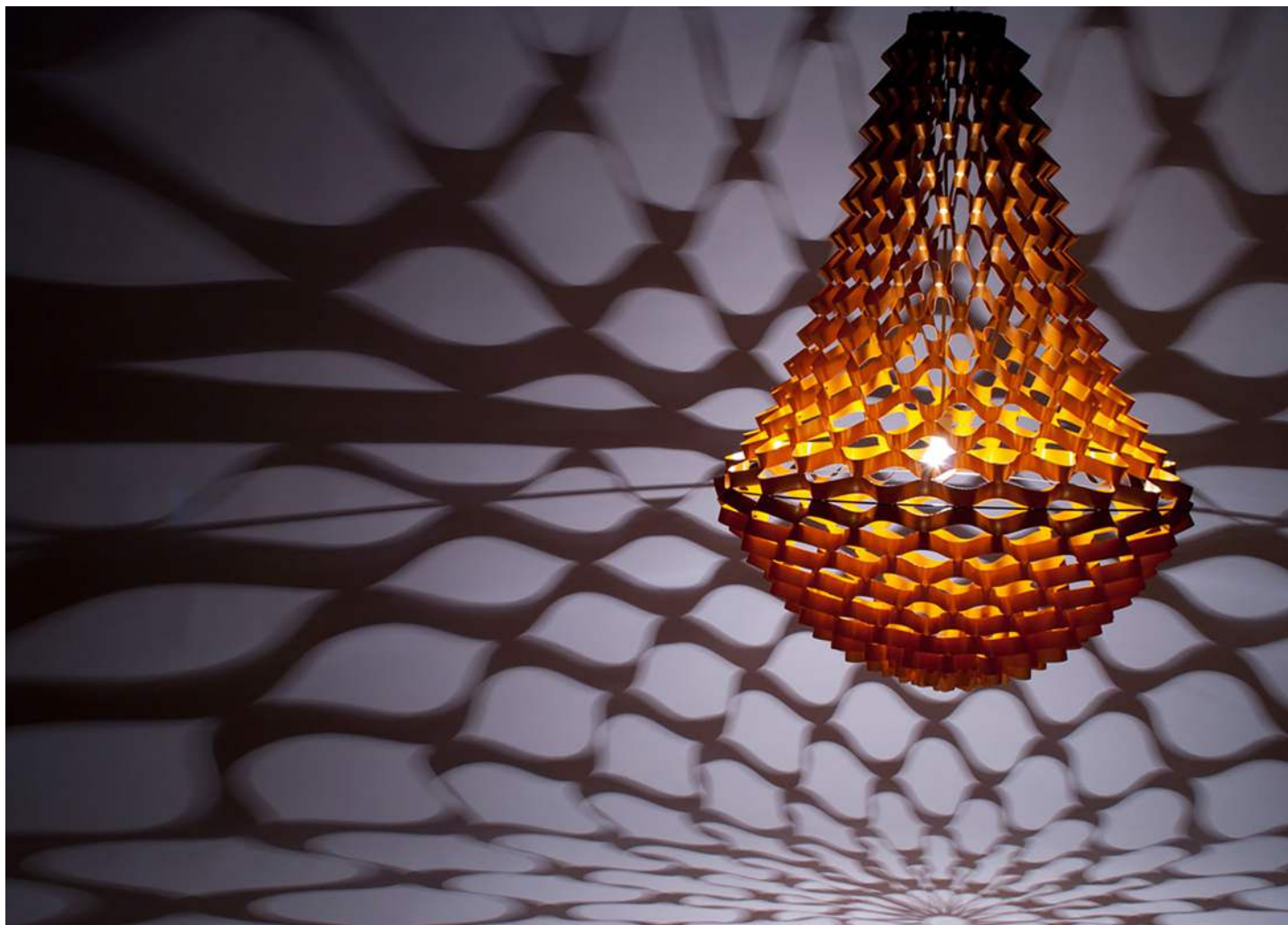
Designer: HG-Architecture, Seoul, Korea www.hg-architecture.com

Promoter: SOMA (Seoul Olympic Museum of Art), Seoul, Korea

Technical info: PVC

Picture credits: Kyungsub Shin





Crown Chandeliers

Grietje Schepers is a Dutch designer known for utilising frolicking and graceful shapes throughout her designs. Using geometrically intricate forms to provide distinctive and eye-catching designs is at the core of her approach. A surprising element can be found in each of her designs. After graduating from Design Academy Eindhoven, she has been primarily working in product design, but also works as a commissioned interior designer.

As an independent designer she creates interior products. They are often inspired by her commissioned work, or they become the inspiration. Grietje has great energy for expanding a small thought to a big gesture. With ease in making a space feel informal, charming and light, she turns spaces into exciting locations. A keen eye for material, colour and experiment she creates large-scale installations that impact with their overwhelming colour or spaciousness.

Pushing projects from first concepts to large-scale structures, she is passionate about the fine detailing, as she feels that is what makes something feel special and worth remembering.

The Crown chandeliers illustrate a classic 'Lustre' but

designed by an ingenious cutting pattern in a fire-resistant high-tech PVC fabric. Due to its modern and open design and can be used in both modern and classic environments. The Crowns are designed to be used in f.e. hospitality areas as well in domestic interiors and optionally even outdoors.

Grietje explains that her passion for design was sparked at a young age: "Growing up, my father used to surprise me by solving household problems with anything he'd have lying around. This sparked my enthusiasm for crafting and experimenting. Still many of my projects start with making samples: coming up with inventive uses of material or ways to attribute material in a new way so that it comes to represent something different." Working on close combinations of material and technique, her use of technology will not distract from the experience of a space (though she doesn't often entirely go without). Especially her independent projects tend to have an element of movement in them.

Designer | **Grietje Scheepers, Amsterdam, Netherlands**

Producer | **JPRS, Eindhoven, Netherlands**

Technical info | **PVC fabric**

Picture credits | **JPRS**



spaces are separated by low partition walls and only one space is completely isolated for surgery with an X-Ray machine. The low partition walls have illumination on top to avoid the direct radiation of the light to patients during treatments.

Architects | **Ren Pepe Arquitectos, Porto, Portugal**

Location | **Porto, Portugal**

Technical info | **PVC panels**

Picture credits | **Ricardo Luoriero**

Dental Clinic

Ren Pepe Arquitectos, founded by a Japanese architect Ren Ito and an Italian architect Alessandro Pepe, recently transformed an old office to a dental clinic with five treatment spaces in the city centre of Porto, Portugal.

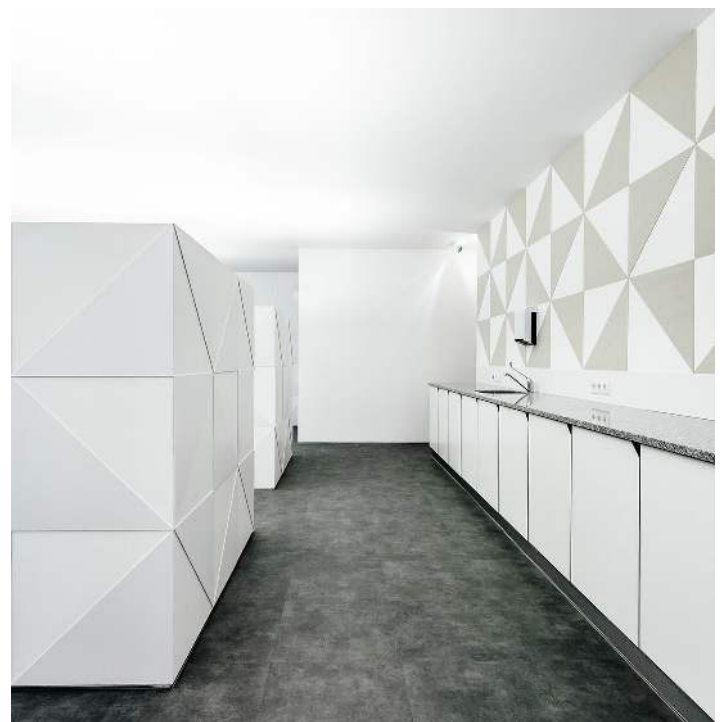
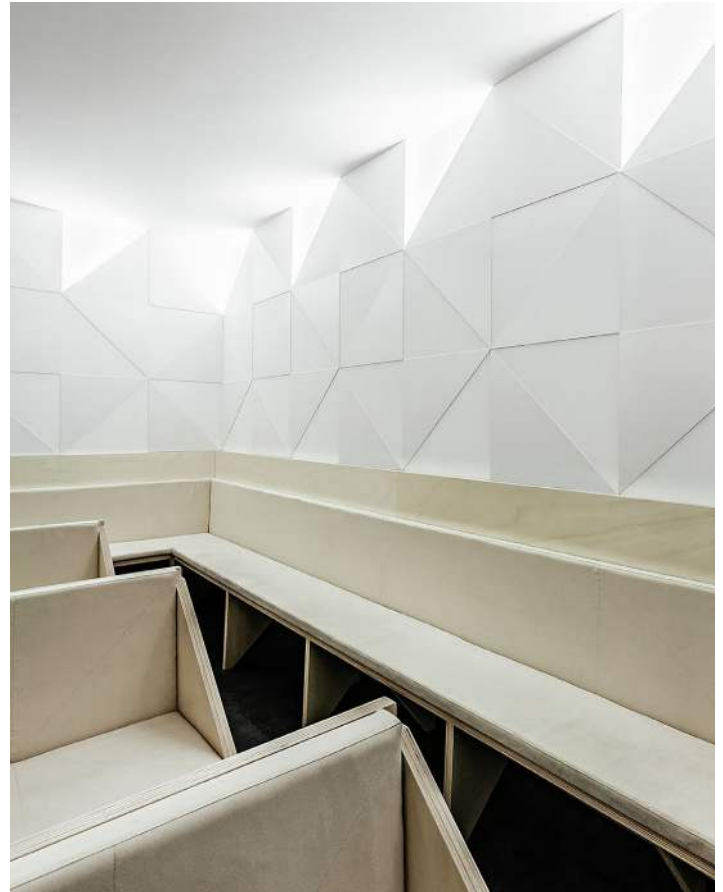
Plenty of facades with tiles near the project area served as an inspiration for the clinic, which has a concept of typical geometric pattern of tile in the city.

The main challenge of the project was to apply the concept inspired by a windmill form geometric pattern. This pattern, composed of triangles, was applied on the walls, furniture, and also in illumination and doors.

The triangle patterns on the wall of the clinic are made of three materials: plaster, PVC panels and typically Portuguese woolen textiles, known as Burel. The Burel is applied to the wall with the same pattern, worked as an absorbent of noise, odour and dust.

In the waiting room, the indirect illumination lamps are integrated in the windmill pattern on the wall. The benches in this room were also designed in a triangular pattern, applied even to the stitches of the cushions.

A door with the same pattern screen separates the waiting room and the treatment room. Four, of the five, treatment





Designblok Lyon

Designblok is a temporary installation designed by Czech duo Marek Deyl and Jan Šesták. This temporary construction is inspired by a group of trees.

The light emphasises the flexibility and fluid aesthetics of the PVC membrane. Beauty of movement, curve of shape and the pottery of the object all work together for this creation.

The installation also presents a variety of types of foil - transparent, opaque and shiny. Is six metres high and made up of subtle structures with steel beams on which it is fitted with internal lighting.

Architects | **Marek Deyl, Jan Šesták, Prague, Czech Republic**

Location | **Prague, Czech Republic**

Technical info | **PVC Barrisol membrane**

Picture credits | **Filip Šlapal, Piotr Lenski**



Store Reform

On Mesones street, one of the best-known, commercial and important streets of Granada, a little store of 50 m2 has been renovated by Spanish architects of A-cero. The client is the Spanish leading brand 'Camper', devoted to the exhibition and sale of trendy shoes. It will be Camper's first store in Granada.

The first important point is the use of the space, as a wide and useful place is needed. A-cero was selected for this work because of its actual, fresh and dynamic design, the keys for Joaquín Torres and Rafael Llamazares' projects. Each store that Camper opens has its own style and represents an event, depending, among other things, on the designer chosen for the project.

Camper always looks for a new style and concept for their stores, making a different and special place. Other collaborators chosen by Camper have been Olé Armengol, Fernando Amat, Óscar Mariné, Javier Mariscal, Carlos Rolando, Jordi Nogués, Martí Guixé, Shiro Miura and, more recently, in the project Toðer, Jaime Hayón, Alfredo Häberli, Konstantin Grcic, Campana brothers, Memphis group, Bouroullec Brothers, Benedetta Tagliabue, Tokujin Yoshioka, Doshi & Levien, Juli Capella

and Tomás Alonso.

Two colors: white and red, typical of the A-cero interior design projects and Camper. The space is open and projected with organic elements like the expositors, made of lacquered wood with white shelves and red faces, having an indirect lighting by LEDs. Also, following the floor shapes, there is a red and white PVC floor. Adding more sculptural values to the complex, in the middle part there is another module curve used as a breach change. To achieve more depth at the rear wall there is a mirror. There is still a space for a warehouse at the back. The front is made of composite panel with red aluminum and the showcase has been made of white and red PVC following the style of the store.

The final result is an interesting fusion between the corporate resources and designs of Camper and A-cero - a special place that improves the market of the area and also to feel the universe of Camper and A-cero.

Architects | **A-cero Estudio Arquitectura, Madrid, Spain**

Location | **Granada, Spain**

Technical info | **PVC floor and panels**

Picture credits | **Juan Sánchez**

