UNStudio

ENVIRONMENTAL MANAGEMENT REPORT

26 June 2012

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2.1 MANAGEMENT STATEMENT

The Environmental Management Policy is part of UNStudio's ISO 14001 and ISO 14064 participation; it holds the ambitions and goals UNStudio sets in relation to its sustainable office processes and projects.

As a firm with wide design experience ranging from masterplanning, infrastructure, offices, housing, retail & entertainment to product design UNStudio is allowed the opportunity to investigate environmental solutions at numerous scales. For example, a sustainable approach at the level of the masterplan has the potential for biggest sustainable gains. Enhancing public transportation, providing a functional and attractive bicycle and pedestrian infrastructure and creating a green landscape design will greatly reduce CO_2 consumption on site. The planning and programming of projects must have both a strong organizational principal as well as the ability to adapt to changing needs allowing it to be sustainable over a long period of time.

Also the organisational qualities of the firm itself are of importance when dealing sustainable solutions. UNStudio has looked into its internal processes and how it can diminish its CO_2 emissions.

Most of the goals presented in this document have been accorded by the Board of Directors during the Management Review of 11 April 2012. The remaining goals have to be further researched and will be presented in August 2012 for final accordance.

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3 INTRODUCTION

> "*UNStudio will actively promote and communicate the need and use of its environmental policies in the architectural field to others both internally as externally*"

As an architecture office, the products UNStudio produces are of a wide variety. As part of the implementation of the ISO 14001 standard UNStudio sees the importance to define its environmental goals in the organisation and its products per quality cycle of 1 year.
Products range from buildings to artwork, from installation to city landmark.
All these products can potentially benefit from a environmental policy. This document describes the content and current status of this Policy

As an Organization

UNStudio aims to prevent pollution, reduce waste, encourage recycling and reduce energy consumption throughout business policies and daily practice.
Actions such as reducing the use of paper, compensating airplane CO_2 and maintaining a low commuting CO_2 footprint by a office bike plan are at the heart of UNStudio's environmental processes.
We have furthermore committed to work with environmentally conscientious 3rd parties.
We monitor and control the environmental performance and aim for continuous improvement through the use of the Quality Team within the studio.

In Architecture

As part of the UNStudio Design Policy UNStudio had been working to maintain a leading position in the Field.
Doing so, we have been actively working with building environmental policies for several years already without actively proclaiming such a focus to the public.

Several buildings have, in cooperation between client and architect been proposed as pilot projects to receive an environmental certification prior to the ISO 14001 accreditation of the Studio.
Within the studio keeping up knowhow and knowledge on new materials and possibilities has always been one of the primary attention points. In previous years several knowledge communities have been set up to maintain and improve this. The Adequate Materials Unit & Sustainability Knowledge Communities have this specific role.

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3.1 BOUNDARY

The emission data is based on UNStudio's office(s) in The Netherlands, located at Stadhouderskade 113 -115 in Amsterdam. The offices in Asia (Hong Kong, Shanghai) do not partake in this certification procedure, as the operational management of these offices is independent of that in Amsterdam. Only the global higher management decisions are made in collaboration.

Van Berkel & Bos U.N. Studio B.V. (Amsterdam)
Tradename: UNStudio
(founded October 1989)

Directors: Van Berkel en Bos Architectuur Holding B.V., AIP Holding B.V., Gerard Loozekoot B.V. and IBDES B.V.

(85% vB&BH, 5% AIP Holding B.V., 5% Gerard Loozekoot Holding B.V., 5% IBDES B.V.)

UNStudio Asia Limited
incorporated in Hong Kong
(founded 30 October 2009)

Director: Van Berkel en Bos U.N. Studio B.V.
Registered address: HK, business adress: A'dam

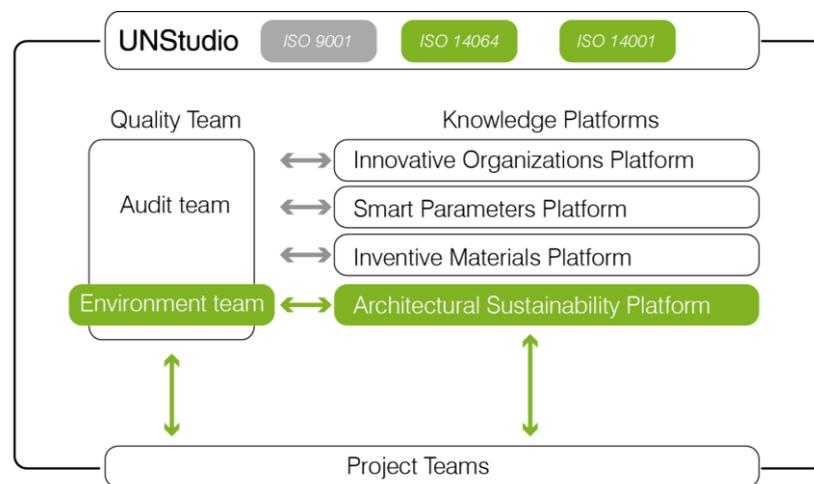(100% UNStudio)

联网建筑设计咨询 (上海) 有限公司
United net architectural design consulting (SH) Limited
(UNStudio Asia Shanghai)
incorporated in Shanghai
(founded 25 June 2010)

Legal Representative: Bernhard Franciscus van Berkel, General Manager: Caroline Elisabeth Bos, Supervisor: Hannes Pfau

Shareholder: 100% UNStudio Asia Limited

We have looked into the GHG emissions caused by UNStudio's operational activities and do not find our company responsible for the activities our clients and suppliers partake in, as our clients specify for themselves the needs they wish in their buildings. Designing a building which has little CO_2 emission would therefore not fall within this inventory. However, we do feel that creating awareness is within our reach and we can influence the firms with whom we collaborate.

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3.2 UNSTUDIO ENVIRONMENTAL TEAM

The current team busy implementing the Environmental Policy within UNStudio consists of a diverse group of people within the office. Under the Environmental Policy we have placed the qualification for ISO 14001 and 14064. The Environmental Team busy with this subject forms its basis within the Quality Team and broadens into other UNStudio departments such as IT and Communication. An important link is also made to the Architectural Sustainability Platform and the Project teams for the more project related issues.
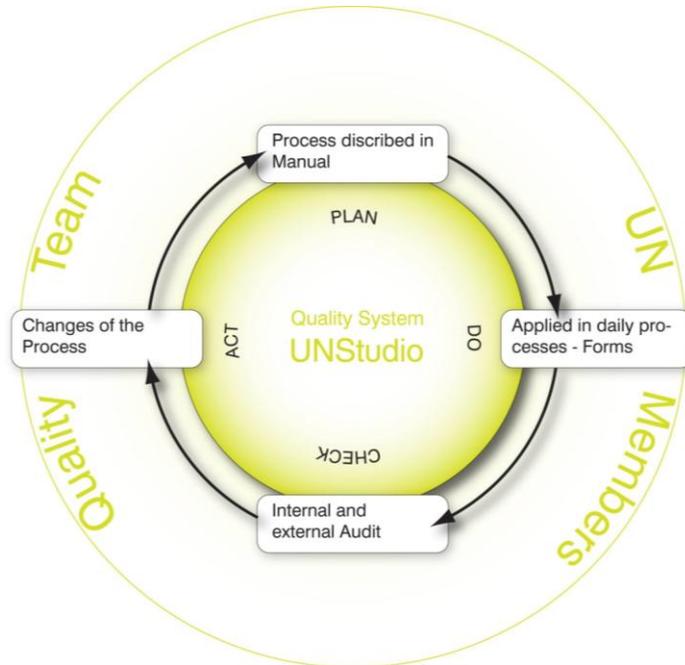

The team meets quarterly in order to discuss new environmental proposals and review outstanding actions of which minutes are made.

The Environmental Team follows the common cycle of improvement and learning which UNStudio uses as base throughout its Quality Management. The controlled course of processes at UNStudio is based on the Plan-Do-Check-Act principle. This principle can be applied to all processes; to projects as well as facilitating processes, but also to the policy cycle.

The procedure starts with a plan (Plan), in which goals and points of departure and conditions are defined and clarified and things are structured and organised. Subsequently the plan is executed (Do). Meanwhile and after execution the activities are checked if things are done according to plan and if goals are achieved (Check). If necessary corrections and adjustments are made to either the plan or the activities (Act) in order to achieve set goals. The Plan-Do-Check-Act principle results into continuous improvement and learning.

Stadhouderskade 113

PO Box 75381

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4 GOALS

The Environmental Team put together a proposal for the goals UNStudio would strive for in the next audit year. These were discussed in the Management Review on 11 April 2012, and a selection was made of the most important goals to follow which are presented in this document.

We have split them in four main topics: (1) Project specific, (2) CO_2 specific, (3) Internal Process and (4) Corporate Social Responsibilities. All topics are presented below as both achievements of previous years and defined goals for the audit year June 2012 - June 2013 and are checked regularly for their development. Please find a description of UNStudio's defined goals in the following pages.

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4.1 PROJECT RELATED GOALS

Being committed to the comprehensive and consistent implementation of sustainable solutions, results amongst others in the reduction of energy and materials. UNStudio endeavors to design specific architectural contributions that are beneficial to the climate and the environment. The architectural instruments that have been found to promote sustainability are:

- Passive design tools (orientation of building; window treatments, et cetera).
- Design features that stimulate a more sustainable use of the building by its occupiers.
- Extending longevity by making building more future-proof .
- Integrating Active tools fully into the architectural gestures of our designs.
- Materialization (sustainably produced and transported materials).

Achievements

- The management of knowledge is essential for UNStudio. As keeping know-how on a high level is important, UNStudio has implemented Knowledge Communities which serve as knowledge exchange platforms on selected key topics. To facilitate and stimulate the knowledge spread on aspects regarding the environmental building policy, members of the Architecture Sustainability Platform (ASP) are involved in projects throughout the studio.

- Another point in regard to the management of knowledge is the role of the Quality Team in informing studio members of the ISO 14001 environmental policy by organising environmental ISO presentations. These workshops are aimed to maintain a Pro-Active approach when a client does not have its own environmental aspirations and can therefore be integrated into the start-up workshops.

- The ASP unit has set up the Sustainability Decision Circle Tool, which has been integrated into the design process of various projects. The tool helps gain insight in the sustainable features a project entails.

- Insight (and comparison) in the different international sustainability standards has given an underlay of additional points to be included in the Sustainability Decision Circle Tool.

- A materials use policy has been setup to provide extra knowledge and know-how within the studio in the material field of the certification process. Even in cases where it is not necessary to invent a completely new material, UNStudio strives to select, adapt, combine and deploy existing materials in a thoughtful and inventive manner. We make every effort to build inspired and imaginative collaborations with other experts and with manufacturers in the construction industry to push for progress in the field of materials. Ambition is to have a Preferred Material Ranking' to assist an easy choice.

- We will continue to stimulate the environmental ambition of the projects through well-informing our clients. As we are unable to decide if our projects will be certified we can inform our clients on the advantages of sustainable elements and on the impact of having a 'green' certificate.

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Goals

- Further development of UNStudio's Sustainable Mission Statement which will form the collective direction we will follow in our internal and external portrayal of sustainable values.

- The List of Suppliers (and the linked evaluation process) will be extended such that information is gathered on the how sustainable our suppliers are. The process of evaluation will also be further optimised in order to stimulate employees to fill the evaluation form in and maximising feedback to the studio.

- The current 'green' project database of the Architectural Sustainability Platform will be further improved with updated and relevant information

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4.2 REDUCTION OF CO2 EMISSIONS

UNStudio's environmental policy was first initialized in 2010, in accordance to ISO 14001:2004. In 2011 the CO2 Prestatieladder followed for which we are currently adding more CO2 reduction measurements of which some have already been set into motion. The implementation and monitoring of the CO2 goals is done by a smaller group of the Environmental Team. Because we are just now starting to implement reduction measurements within the office, 2011 will be used as a base year.

From 2011 onwards, UNStudio will try to decrease CO2 emissions with 5%. This number was set with the knowledge that our office has already made some major steps in CO2 reduction in the past years, switching to green electricity and gas being one of them.

CO2 emissions (eq.ton)		Reduction of 5%
2010	2011	2015
484	459	460

Achievements

- Set up and integrated a chapter in the travel policy describing specific and clear guidelines for business car travel within the office. (Scope 1)
  - Guidelines for choice in public transport/car use
  - Guidelines for personal use of office car (eg limiting it to use of the green car)
  - Stimulate 'new driving'
  - 1/3 of the office cars need to be 'green'
  - If a new car is leased, the car will have label A or the CO2 emission is diminished.

- Set up and integrated a chapter in the travel policy describing specific and clear guidelines for flight transportation within the office. (Scope 2)

- Set up a bike plan for the office to stimulate employees to use the bike. (Scope 2)

- UNStudio office makes solely use of 'green' electricity with SMK Milieukeur (Scope 2)

- Implementation of regulatory energy inventory methods in order to specify our usage and set quantitative goals for following audit years. (Scope 2)

- Placement of sun-foil on the windows, which will reduce the sun accession with 50%. It also reduces usage of cooling appliances during the summer.

- Changed to suppliers that offer more sustainable products/services where possible, regarding office lunch, office supplies, postal services. (Scope 2)

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Goals

- Further promote the UNStudio Travel Policy

- Reduce CO2 emission per euro (revenue) caused by flight travel with 10% (using 2011 as base year) (Scope 2)

- Continue the stimulation of the bike plan (Scope 2)

- Start compensating for the CO2 emission caused by UNStudio business air travel. How and in which project to invest still needs to be researched. There is preference for projects in which UNStudio can use and develop its expertise further. (Scope 2)

- Research possibilities to diminish our electricity usage. (Scope 2) Examples could be:
    Further develop/expand the regular energy inventory methods
    Change the current monitors at Finance/HR for more energy efficient monitors.
    Research possibility in moving our data servers to another location
    Research green alternatives when replacing (colour) printers and/or the number of printers per floor in the office.
    Research if placement of window ventilators (for natural ventilation) will make it possible to remove all desk ventilators in the office

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4.3 INTERNAL PROCESS

UNStudio continuously researches its internal material use and how these materials can be recycled or used more efficiently. The separation of waste and recycling used materials such as paper and plastics are main topics for UNStudio's Environmental team.

Achievements

- Researched the actions suppliers take to recycle materials and have approached them to gain further information.

- Duplex printing is stimulated in order to reduce the paper consumption. Since it is not possible to set the printers on duplex printing automatically due to the frequent drawing printing, we informed UNStudio Members how to print their other documents duplex. All printers are provided with instructions and it is communicated via email and Intranet.

- Create awareness on the amount of wasted prints and paper in order to reduce this number

Goals

- Further research actions taken by suppliers regarding recycling.

- Further research measures to reduce the number of wasted and non-collected prints and research whether a quantitative goal can be set for the reduction of paper usage (with Automation).
    Research whether a 3rd party (see 4.4) can contribute to creating more awareness
    Possibilities to set a limit on amount of pages to be printed at one time

4.4 CORPORATE SOCIAL RESPONSIBILITY (CSR)

UNStudio sees a dual responsibility wherein we evaluate both our external suppliers and internal processes. UNStudio's main 3rd parties are evaluated on their environmental certification and Corporate Social Responsibility.

Achievements

- Changing to and/or stimulating current suppliers to provide 'greener' products. This was done for office supplies and cleaning products.

- Set up three socially responsible agreements to underlay the value of sustainable initiatives to UNStudio.
    AAP: collection of empty cartridges and toners. This year 22 boxes with a total of approximately 150-200 cartridges/toners were collected.
    Humana: office wide collection of clothes with a total of 304,3 kg in 2011
    Rijnja: after initially delivering back the Rijnja tubes to be re-used it seemed they get more paper in tubes delivered than they can distribute themselves. However, they still recycle the tubes and so will we.

- Various CSR policies have been set up to ensure that there is no discrimination on grounds such as sex, race, disability and religion made in UNStudio's terms and conditions, recruitment and training. The policies include an Equal Opportunity Policy and an Ethical Conduct Policy, and are reviewed on a regular base.

- Within UNStudio's CSR approach, an Emergency Plan has been developed to ensure the safety of our employees. The ERO's (Emergency Response Officers) are responsible for both informing employees and the maintenance and execution of the ERO system in case of an emergency.

- UNStudio takes responsibility in the promotion of sustainable solutions in the field of architecture. We will participate in various lectures and brainstorm sessions wherein we can share our knowledge with other specialists in the field.

Goals

- Set up an agreement with or stimulate the use of Taxi-E; fully electric taxis in and around Amsterdam.

- Research whether a 3rd party can contribute to creating more awareness regarding reduction of paper

- Change to suppliers that offer more sustainable products/services where possible. Main focus on project related suppliers. (Scope 2)

- Informing UNStudio members about the green certifications current (preferred) suppliers have by posting this on Intranet. (Scope 2)

- UNStudio will further develop an official Health&Safety Policy, which takes its base from the Dutch ARBO law. The policy will describe how UNStudio commits itself to the health and safety of its employees.

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5.2 Definition of the Carbon Footprint Scopes

A carbon footprint is defined as the total amount of greenhouse gases produced to directly and indirectly support human activities. It is the sum of all emissions of CO2, which were induced by these activities in a given time frame. Usually a carbon footprint is calculated for the time period of a year. The amount is usually expressed in equivalent tons of carbon dioxide, or CO2.

Because CO2 is a greenhouse gas, the emission reduction falls under the GHG-protocol. The Greenhouse Gas Protocol (GHG Protocol) is the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions. CO2 is the most prevalent GHG and the one which acts as a standard unit of comparison.

When we want to calculate our carbon footprint, it is important to count both direct and indirect emissions. The GHG Protocol defines direct and indirect emissions as follows:

- Direct GHG emissions are emissions from sources that are owned or controlled by the reporting entity. For instance, the gases generated by a car owned by your company would count as direct emissions.
- Indirect GHG emissions are emissions that are a consequence of the activities of the reporting entity, but occur at sources owned or controlled by another entity. For instance, the gases generated by a taxi you hired would count as indirect emissions.

The GHG Protocol further categorizes these direct and indirect emissions into three broad scopes:

- Scope 1: All direct GHG emissions.
- Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam.
- Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T&D losses), outsourced activities, waste disposal, etc. which are not covered in Scope 2.

Scope one covers the emission of greenhouse gases directly from the source, such as the fugitive emissions associated with the leak of refrigerant gas from HVAC-R (heating, ventilation and air conditioning) systems and RAC (refrigeration and air conditioning) systems. The emissions category covers any company owned asset with the potential to discharge the gas and also covers fossil fuels.

The second category covers indirect discharges occurring during a production process. Owners of facilities who can conserve energy and reduce the amount of electricity that needs to be produced to run their processes and equipment can directly reduce this second scope of emissions.

Sometimes, facility owners have the ability to control emissions of harmful greenhouse gases in the production process of products manufactured elsewhere. For example, where a manufacturer produces goods, such as paper products or fuels, in a remote location, the recipient facility owner can cut down on his need for these goods, or switch to a more environmentally friendly option. This is covered under emission scope three.

The diagram made by SKAO visualizes which CO2 emission falls under which scope. It includes the same scheme as the GHG protocol, but adds rental cars (including personal cars from employees, which are used for business purposes) and business air travel to scope 2.

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5.3 Definitions scopes 1 + 2

Scope 1 covers the emission of greenhouse gases directly from the source, such as the fugitive emissions associated with the leak of refrigerant gas from HVAC-R (heating, ventilation and air conditioning) systems and RAC (refrigeration and air conditioning) systems. The emissions category covers any company owned asset with the potential to discharge the gas and also covers fossil fuels.

The second category covers indirect discharges occurring during a production process. Owners of facilities who can conserve energy and reduce the amount of electricity that needs to be produced to run their processes and equipment can directly reduce this second scope of emissions.

Within UNStudio, scope 1 affects all Business Car travel. Scope 2 affects our energy- and gas usage and air travel, the latter being our biggest emission factor. We do not use personal cars for business usage, as do we not control any heaters or generators within the office building.