

# STATEMENT OF CONTINUED SUPPORT



Novalume joined the UN Global Compact two years ago in November 2017 and I am pleased to confirm that Novalume reaffirms its support of the Ten Principles of the United Nations Global Compact in the areas of Human Rights, Labor, Environment and Anti-Corruption.

In this second annual Communication on Progress we describe the actions we have taken to continually improve the integration of the Global Compact and its principles into our business strategy, culture and daily operations.

We also commit to sharing this information with our stakeholders using our primary channels of communication.

Sincerely yours,

Kim Krahl Larsen

Chief Executive Officer of Novalume



# ABOUT **NOVALUME**

Novalume is an innovative Danish company that is committed to delivering complete Smart City lighting solutions that fit municipalities' needs in terms of energy efficiency, savings, sustainability and Smart City infrastructure.

In collaboration with Denmark's export credit agency (EKF), Danish banks and other well-known financial institutions around the world, Novalume offers a payment plan that makes investing in LED and Smart City technology pay for itself. We call it the 'pay-as-you-save' model. Thanks to this model, Novalume provides complete Smart City solutions that can both ensure a completely new LED lighting solution with IoT-ready network and drastically reduce the electricity costs and CO2 emissions of its customers by up to 75%.

And city lighting management is just the beginning. Novalume's engineers have created the Lumintell™ Smart City and Lighting Management System that can serve multiple Smart City functions. Thanks to Lumintell™, each streetlight is connected to an online control and monitoring application that can be accessed via www.lumintell.city on a computer, tablet or smartphone. Through the web-based and user-friendly application, city officials can access a customized Smart City dashboard with precision dimming controls and profiles, remote diagnostic and proactive maintenance, performance graphs, Smart Data and reporting tools that help city managers to take data-driven decisions and improve public services.

Novalume is currently pursuing the expansion of its customer base, markets and scope of services in Scandinavia, the rest of Europe, Latin America and Asia and manages several large Smart City LED lighting installations around the globe. After completing the installation of 27,000 LED streetlights in the city of Talca, Chile, last year, implementation of the Lumintell™ Smart City and Lighting Management System and public Wi-Fi network was completed this year.

# ABOUT **NOVALUME**

#### Novalume key competencies



### Novalume delivers advanced LED lighting technology for Smart Cities

We reduce cities' energy consumption, maintenance costs and  $CO_2$  emissions by up to 75%.



## Novalume provides the Lumintell™ Smart City and Lighting Management System with IoT-ready network

We enable city leaders to make their city more efficient, intelligent and sustainable.



Novalume offers the "Pay-as-you-save" Financing Plan Novalume simply uses the generated savings to cover the

payments of the Smart City upgrade.

#### **Novalume Culture**

Passionate, Innovative, Solution-Oriented, Predictable and Eco-Friendly: These are the core values of Novalume's culture.

They guide us in our daily work, in the way we do business and in our commitment to our customers - a commitment that is bound by trust and professionalism.

At Novalume, our vision is to develop the best-in-class Smart City lighting solutions and enable our customers to achieve more with less.

## NOVALUME OFFICES

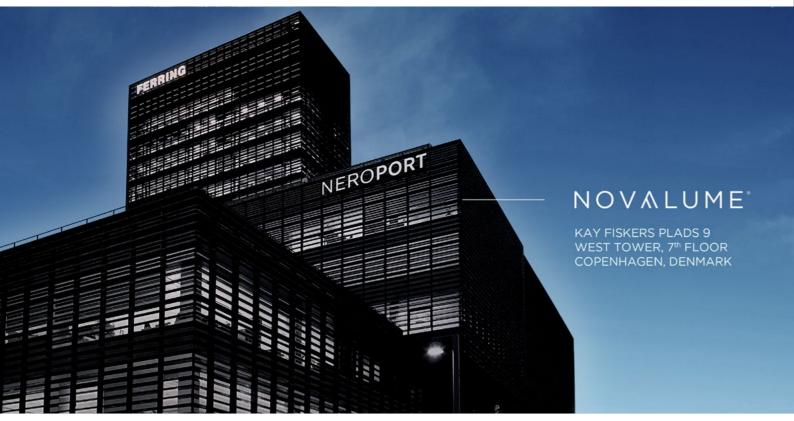
Novalume A/S is headquartered in Copenhagen, Denmark, with two branch offices: in Santiago, Chile and in Bogóta, Colombia.

In June 2019, Novalume moved its headquarters from Roskilde to Copenhagen. The new offices are in the Ørestad district of the city, a modern and growing business and residential area that is home to many leading Danish companies and institutions.

The new Novalume headquarters are on the top floor of the Neroport building, conveniently reachable by public transport and car, as well as being in proximity to Copenhagen Airport.

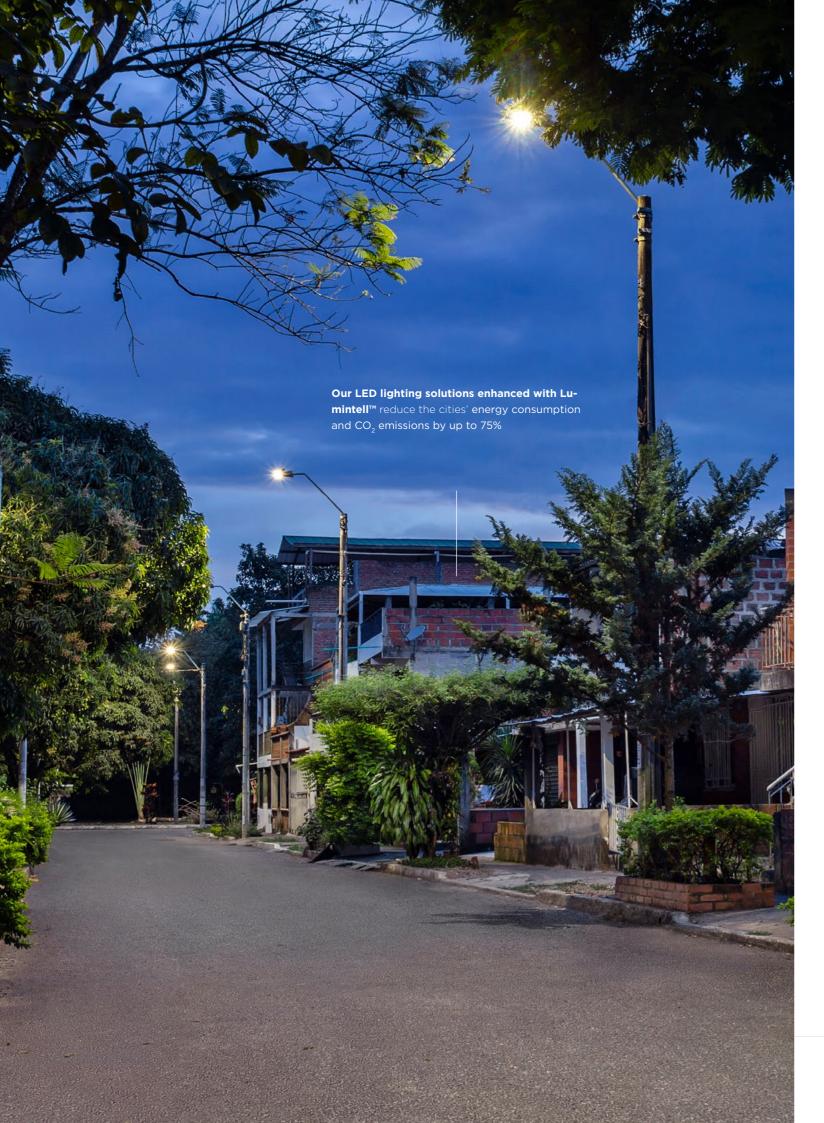
## NOVALUME OFFICES





"Hundreds of cities around the world are switching to LED lighting and building Smart City infrastructure, and the social, economic and environmental benefits are already being documented. Thanks to the existing street lighting infrastructure of cities and our LUMINTELL $^{\text{IM}}$  smart system, we can connect cities, reduce dramatically their energy consumption, maintenance costs and  $CO_2$  emissions, provide in smart data from sensors, and make cities more efficient, intelligent and sustainable."

Kim Krahl Larsen, CEO of Novalume



# COMMUNICATION ON PROGRESS

**United Nations Global Compact 10 principles** 

#### **HUMAN RIGHTS**

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and

Principle 2: make sure that they are not complicit in human rights abuses.

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Novalume continues to support and respect the protection of internationally proclaimed human rights and to make sure that the company is not complicit in human rights abuses.

In particular, Novalume takes action to avoid infringing human rights and seeks to make a positive contribution towards the protection and fulfillment of human rights.

#### Continued application of the Code of Conduct

In relation to these commitments, in addition to adhering to international and local laws where we operate, the Novalume Code of Conduct continues to be a central document for how we do business. Novalume distributes the Code of Conduct to all new employees and all cooperation partners and insists on compliance as a condition of working with Novalume.

The Code of Conduct sets out concrete conduct requirements and states that Novalume will not "conduct business with a Partner engaged in violation of fundamental human rights."

#### Staff meetings and supplier evaluations

Novalume encourages employees to meet and feel comfortable discussing any issues of concern. Staff meetings take place on a regular basis, at least once a month, and issues raised are brought to the attention of management.

Novalume conducts supplier and sub-supplier evaluations once every two years. In this way, Novalume monitors and evaluates the respect of human rights protection in the supply chain. The next supplier and sub-supplier evaluations are scheduled for 2020.

#### **Supporting charity**

Prior to Christmas of 2018, Novalume and its employees gave financial support to the Danish charity Dansk Folkehjælp (Danish People's Aid), which works to help vulnerable people in society in Denmark and in other countries.

The money donated went towards assisting families in need to buy Christmas presents for their children.





Kim Krahl Larsen, Novalume's Chief Executive Officer, during one of the Supplier Evaluations in China, in September 2018.



#### LABOR

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: the elimination of all forms of forced and compulsory labor;

Principle 5: the effective abolition of child labor; and

Principle 6: the elimination of discrimination in respect of employment and occupation.

#### **Code of Conduct requirements**

Being founded in Denmark, a country with a strong history of trade unionism and collective bargaining, Novalume naturally upholds the freedom of association and the effective recognition of the right of collective bargaining in the countries where it operates. This is affirmed in the Novalume Code of Conduct.

Novalume complies with all rules and regulations with regard to labor in the regions where the company is represented. In addition, the Code of Conduct prohibits all forms of forced labor and child labor and seeks to impose higher standards than the legal requirements, for example in the areas of remuneration, leave and working hours.

#### Equal opportunities scheme

Novalume is an equal opportunity employer and is committed to not discriminating in any way in respect of employment and occupation.

In March 2019, Novalume joined a scheme organized by the Danish Ministry of Employment (Beskæftigelsesministeriet) to offer an internship to a person who is reentering the workforce after having been out of work for an extended period due to illness. Novalume cooperated with the intern's local job center to design an internship that would take into account the intern's health circumstances to facilitate a positive return to the workforce.

#### Competitive terms of employment

In addition to furthering the Global Compact Principles on Labor, Novalume seeks to go beyond them.

Novalume's new headquarters in Copenhagen provide improved working conditions for its employees, with a high-quality lunch provider, an exceptionally light office environment and comfortable climate-controlled office space.

Novalume reimburses its employees competitively and has an attractive bonus scheme when sales targets are met. In addition, Novalume pays more than half of employees' lunch, there is a pension scheme with health insurance cover for all employees, and several staff members benefit from the use of staff laptops and mobile phones that can be used privately.

#### Staff meetings, workplace evaluations and supplier evaluations

Novalume monitors and evaluates its performance with regard to labor in the same way as human rights protection, as described in the previous section.

Due to reduction in numbers of full-time employees, Novalume no longer has an official Work Environment Organization ('Arbejdsmiljø Organisation'), as was detailed in last year's Communication on Progress. However, employees are still encouraged to freely unite themselves to raise work environment issues and the company voluntarily continues to align itself with the rules and regulations implemented by the former Work Environment Organization.

In accordance with Danish law, a workplace evaluation ('arbejdspladsvurdering') is carried out annually at Novalume's offices. The most recent evaluation was performed in the new offices prior to the company's move in June 2019.

The supplier and sub-supplier evaluations, described in the section on human rights above, include inspecting health and safety certificates from suppliers and ensuring that the Code of Conduct provisions on working conditions are being respected. According to the Code of Conduct, suppliers are also required to keep records to demonstrate compliance.



Quality Management System Certificate



OHSAS 18001 Certificate



ISO 14001 Cerificate

#### **ENVIRONMENT**

Principle 7: Businesses should support a precautionary approach to environmental challenges;

Principle 8: undertake initiatives to promote greater environmental responsibility; and

Principle 9: encourage the development and diffusion of environmentally friendly technologies.

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Conducting an environmental policy in line with the Global Compact's environmental principles is still central to Novalume's business.

#### Precautionary approach

With regard to taking a precautionary approach to environmental challenges, Novalume deems the main risk of environmental damage due to its activities to be in the supply chain and addresses this risk with provisions for environmental protection in the Code of Conduct, which must be adhered to by suppliers. The Environmental Protection standards include, but are not limited to, minimizing pollution in the supply chain. These provisions are intended to ensure that our cooperation partners also protect the environment and adopt a precautionary approach to environmental challenges.

Novalume's products and services both promote greater environmental responsibility among our clients and encourage the development and diffusion of environmentally friendly technologies.

#### Reduction of energy consumption and CO2 emissions

One of Novalume's environmental focus areas is reducing energy consumption and thereby CO2 emissions. Projections indicate that 5 billion people (60% of the world's population) will live in cities by 2050 and, according to the International Energy Agency, the overall demand for lighting will be 80% higher by 2030 than it was in 2005.

With lighting representing a large and increasing share of municipal energy consumption, our LED public lighting solutions - with the Lumintell™ smart system - allow municipalities to drastically reduce their energy consumption and CO2 emissions by up to 75%. This important reduction of energy consumption and CO2 emissions has a direct and

positive impact on the environment.

#### **Environmental monitoring with IoT sensors**

Another of Novalume's focus areas this year, the incorporation of IoT sensor plugins for our Lumintell™ Smart City and Lighting Management System, also contributes to promoting greater environmental responsibility and developing and diffusing environmentally friendly technologies. Novalume's IoT solutions put municipalities in a position to initiate environmental initiatives regarding air pollution, noise pollution etc.

Just as monitoring and responding to key performance indicators is an integral part of business interventions, successful environmental projects are also data-driven. In order to improve quality of life in a city, it is first necessary to know what the starting point is. Without keeping track of environmental indicators, it would be impossible to know if climate initiatives were successful or if goals were being met. In practice, this means the need for air quality sensors in different parts of cities, sending data in real time.

#### The new Novalume offices

Environmental responsibility and sustainability were major factors in the choice of Novalume's new offices in Ørestad, Copenhagen. The offices are located in the Neroport building, which is owned and operated by the Swedish property company Castellum.

Castellum is the Nordic region's most sustainable property company, having ranked first in the world in the 2019 Global Real Estate Sustainability Benchmark (GRESB) awards for the fourth consecutive year. Castellum's approach to the ownership, management and development of the Neroport building and its other property holdings includes focus on resource efficiency and high environmental construction standards.



#### 'Go Green' branding

Novalume continues to use the 'Go Green' label to promote greater environmental responsibility. The logo is used in Novalume's marketing materials and features prominently in the new offices.

#### Monitoring our environmental efforts

Novalume monitors environmental protection in the supply chain during supplier and sub-supplier evaluations. The next evaluations will take place in 2020.

Novalume also monitors and evaluates environmental performance using the Lumintell™ system, which provides analytics data, including an energy savings analysis, for the installations where the system is deployed.

Novalume's environmental efforts are further detailed in the Sustainable Development Goals chapter of this publication.



#### **ANTI-CORRUPTION**

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

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#### Code of Conduct provision

Anti-corruption continues to be an important issue for Novalume. Novalume stands by the Anti-Bribery and Anti-Corruption Policy set out in the Code of Conduct. Violation of these provisions by a cooperation partner results in the termination of the business relationship with immediate effect.

#### Management pledge

Top management in the company is still required to sign and abide by an extended agreement and pledge on anti-bribery.

#### Record-keeping and oversight

Novalume's business practices require the keeping of written records to facilitate the monitoring of transactions. Novalume also uses the services of consultancy firms in its overseas dealings to ensure the avoidance of personal business interests and control of transactions.

United Nations Sustainable Development Goals

In addition to its continued support for the Global Compact, Novalume takes action to contribute to the United Nations Sustainable Development Goals (SDGs).

Novalume's activity relevant to the SDGs and the targets that it helps achieve is outlined in the following sections.

Goal 3: Good Health And Well-Being

Target 3.9: "By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination."

One of Novalume's focus areas this year, the incorporation of IoT sensor plugins for the Lumintell™ Smart City and Lighting Management System, is directly related to the goal of promoting good health and well-being, specifically regarding the reduction of air pollution.

Increasing air pollution is a growing global problem and one that requires action from cities and national governments alike. Researchers estimate that air pollution kills nearly 800,000 people a year in Europe alone and the WHO puts the annual fatalities worldwide at 7 million.

As described in the Environment section above, monitoring and responding to data is key to successful environmental initiatives at a local and national level. Lumintell™, in addition to being an intelligent lighting solution, functions as a city-wide IoT-ready network that can be used to connect smart sensors in any location and in any combination. Data from the sensors is then visible directly in the Lumintell™ Front End application, making it easily usable for environmental monitoring.

Real-time monitoring ensures accurate data that allows municipalities to take action to reduce pollution. Action that could be taken on the basis of real-time air quality sensor data might be to regulate traffic in specific parts of the city at various times or impose restrictions on certain types of construction work.

#### Goal 7: Affordable And Clean Energy

Target 7.3: "By 2030, double the global rate of improvement in energy efficiency."

Novalume contributes directly to the goal of doubling the global rate of improvement in energy efficiency by developing technologies that minimize energy consumption and allow people to do more with less.

With street lighting representing a large and increasing share of municipal energy consumption, our energy-efficient solutions have the potential to make a significant contribution to achieving this goal.

Goal 8: Decent Work And Economic Growth

Target 8.2: "Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors."

Target 8.4: "Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead."

Novalume's business model makes it possible for municipalities to upgrade their lighting infrastructure using electricity cost savings to pay for the investment. This cash-flow-positive financial model means that they can

invest in other areas, stimulating economic growth.

Novalume's energy-efficient products and services also facilitate resource efficiency in consumption and the decoupling of economic growth from environmental degradation.

Goal 9: Industry, Innovation, And Infrastructure

Target 9.1: "Develop quality, reliable, sustainable and resilient infrastructure. including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all."

Target 9.4: "By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities."

<u>Target 9.C</u>: "Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020."

Novalume's street lighting products and services form part of the local infrastructure where they are deployed. This year, Novalume launched the Lumintell™ Deployment and Maintenance App and the new Lumintell™ Node. These technological innovations revolutionize the deployment process for smart lighting and unlock the potential for Novalume's products to improve lighting infrastructure around the world.

The electricity cost savings achieved through upgrading to Novalume's solutions are so significant that they pay for the cost of upgrading, typically within a few years. This makes the cost of upgrading very affordable.

For the same reasons as indicated in the Environment section of the Global Compact Principles chapter and the sections above, Novalume's solutions contribute to resource-use efficiency and greater adoption of clean and environmentally sound technologies.

Novalume's public Wi-Fi solution also supports the goal of increasing access to information and communication technology and striving to provide universal and affordable access to the Internet.

#### **Goal 11: Sustainable Cities And Communities**

Target 11.6: "By 2030, reduce the adverse per capita environmental impact

of cities, including by paying special attention to air quality and municipal and other waste management."

Target 11.B: "By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels."

Novalume's products and services facilitate improving air quality and resource efficiency in cities, as well as mitigating climate change.

As described in the Environment section of the 10 Principles, Novalume's energy-efficient street lighting allows cities to reduce their adverse environmental impact by cutting energy consumption and CO2 emissions. Also, as detailed in the Good Health and Well-Being section above, Novalume's IoT sensors and network provide an effective tool for cities to improve air quality and reach other environmental goals.

Goal 13: Climate Action

Target 13.2: "Integrate climate change measures into national policies, strategies and planning."

Novalume's products and services facilitate the reduction of electricity consumption and thereby of CO2 emissions - a central climate change measure - and also provide tools used for reducing other forms of pollution that contribute to climate change.

Goal 17: Partnerships

Target 17.14: "Enhance policy coherence for sustainable development."

Target 17.16: "Enhance the global partnership for sustainable development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the sustainable development goals in all countries, in particular developing countries."

Target 17.17: "Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships."

At Novalume, we believe that the key to sustainable and innovative solutions for Smart Cities and our society is the cooperation between organizations, companies, policy makers and citizens.



Joining local and international networks is a great opportunity for Novalume to improve our business activities and services, get insight into and inspiration about the latest green tech trends and collaborate with other innovative organizations focused on the green transition, the well-being of citizens and smart solutions for cities.

#### **Current partnerships and memberships**

Below you will find our key partners that help us to generate more innovative, more sustainable and greener solutions.

#### GATE 21 - The Gate for Green Growth (Denmark)

Gate 21 is a nonprofit partner organization with a vision of making Greater Copenhagen the leading region in the world for green transition and growth. As a partner of Gate 21, Novalume joins some of the most ambitious regions, municipalities, companies and knowledge institutions in Greater Copenhagen, where we participate in working toward the common goal of accelerating green change and growth. More info: gate21.dk

### LIGHTING METROPOLIS - The largest cooperation platform in Scandinavia for future innovative lighting

Member since 2019. Lighting Metropolis works to make Greater Copenhagen (Skåne, Halland & Eastern Denmark) the region where global companies invest in the innovation, testing and demonstration of future solutions in collaboration with cities, scientists and local companies.

The new lighting project, called Lighting Metropolis - Green Economy (LMGE), will lead to energy savings in the region. Only one fifth of the public lighting in Greater Copenhagen is classified as energy-efficient today. LMGE exploits this enormous potential to implement qualitative and energy-saving LEDs, and thereby further consolidating the region as a leading metropolis of sustainable lighting solutions. 14 Danish and Swedish municipalities participate in this project together with Novalume and other companies. More info: lightingmetropolis.com

#### **DOLL - Lighting the Future of Smart Cities**

DOLL Living Lab is a leading facility of its kind in Europe, testing and demonstrating intelligent outdoor lighting systems and Smart City technologies. 80+ delegations come and visit DOLL Living Lab annually, experiencing the solutions in a 1:1 scale. Currently, 50+ partner companies such as Novalume and knowledge institutions contribute to the Living Lab's success. Novalume's installation is conveniently located next to the visitor center so public decision makers and practitioners from city and

government levels, as well as Smart City-focused players in general, can discover the full potential of the Lumintell™ solution in live conditions. Read more: doll-livinglab.com

### SMART CITY CLUSTER DENMARK - Cluster of Smart City Solutions Providers

Smart City Cluster Denmark is a new Danish initiative (2019) that creates an overall framework for companies, research environments, cities and projects in Denmark that work with the digitization of cities and local communities - Smart City. More info: smartcitycluster.dk

#### STATE OF GREEN - Denmark's Offical Green Brand

State of Green is a not-for-profit, public-private partnership from Denmark. The organization fosters relations with international stakeholders and is a network of Danish businesses, governmental and academic institutions, experts, and researchers. With the other members of State of Green, Novalume will be working to drive the global transition to a sustainable, low-carbon, resource-efficient society. More info: stateofgreen.com

#### **CLEAN Cluster**

CLEAN is a world-leading cleantech cluster based in Denmark with an international focus. Their mission is to accelerate the green and sustainable transition while creating growth for the Danish cleantech companies. CLEAN has four focus areas: Smart Energy, Resource Efficiency, Smart City and Internationalization. The organization creates innovative solutions to some of the challenges that concern us all and as a member of CLEAN, Novalume wants to contribute to this vision. More info: cleancluster.dk

#### EKF - Denmark's Official Export Credit Agency

EKF and other international financial partners assist us in securing our international business transactions. More info: ekf.dk

#### ANAP - Asociación Nacional de Alumbrado Público (Colombia)

Novalume joined the ANAP Group in 2018 in order to promote the evolution of public lighting services in Colombia. All members, through the promotion of work plans and discussion tables, conferences and congresses, develop and pursue constant research and innovation in order to boost the use of new technologies and the preservation of the environment, while improving public services and the quality of life of residents. Novalume will participate at the next Smart City Forum organized by ANAP, Smart City Expo Latam and Alianza Smart Latam in Bucaramanga, Colombia in December 2019. More info: anap.co



#### THE TEN PRINCIPLES OF THE UN GLOBAL COMPACT

Corporate sustainability starts with a company's value system and a principles-based approach to doing business. This means operating in ways that, at a minimum, meet fundamental responsibilities in the areas of human rights, labor, environment and anti-corruption. By incorporating the Ten Principles of the UN Global Compact into strategies, policies and procedures, and establishing a culture of integrity, Novalume is not only upholding their basic responsibilities to people and planet, but also setting the stage for long-term success.

#### **Human Rights**

Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and

Principle 2: make sure that they are not complicit in human rights abuses.

#### Labour

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

Principle 4: the elimination of all forms of forced and compulsory labor;

Principle 5: the effective abolition of child labor; and

Principle 6: the elimination of discrimination in respect of employment and occupation.

#### Environment

Principle 7: Businesses should support a precautionary approach to environmental challenges;

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Principle 9: encourage the development and diffusion of environmentally-friendly technologies.

#### **Anti-Corruption**

Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

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More information about the UN Global Compact 's SDGs (Sustainable Development Goals) by 2030 here: <a href="https://www.unglobalcompact.org/sdgs">https://www.unglobalcompact.org/sdgs</a>

Announcement of Novalume's support of the principles of the UN Global Compact in the Newsroom of Novalume's Corporate Website: <a href="https://novalu.me/un-global-compact/">https://novalu.me/un-global-compact/</a>





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