GLOBAL CHEMICAL LEASING AWARD 2018

NOVEMBER 6, 2018

Best practices in Chemical Leasing and innovative approaches for circular economy
On behalf of the Global Chemical Leasing Team, we would like to extend our sincerest thanks to all participants of the Global Chemical Leasing Award 2018 of which the award ceremony took place in Vienna, Austria, on 6 November 2018 as part of the Green Chemistry Conference. The Global Chemical Leasing Award acknowledges best practices of Chemical Leasing in the categories “Case Studies”, “Special Innovation” and “Research”, and showcases companies, institutions and individuals that have made notable contributions towards sustainability and circular economy.

The impressive number of 91 applications received from 20 countries, including 54 applications for the category “Case Studies”, 18 for the category “Special Innovation”, and 19 for the category “Research”, proves that Chemical Leasing is gaining momentum and is being applied in many companies worldwide and in different sectors.

A special thanks to our donors – the Austrian Federal Ministry of Sustainability and Tourism (BMNT), the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU), the German Environment Agency (UBA), the Swiss State Secretariat for Economic Affairs (SECO) and the Swiss Federal Office for the Environment (FOEN) – who have supported the Chemical Leasing concept from the beginning and have co-organized the Global Chemical Leasing Award 2018 together with UNIDO.

We brought together more than 150 participants from governments, institutions and enterprises as well as leading Chemical Leasing experts to recognize best practices, inspire industries, support policy dialogue, up-scaling and mainstreaming of Chemical Leasing as well as establishing partnerships at the global level.

Throughout the past 10 years, it has been wonderful to see such a wide array of efforts, ranging from innovative applications and new digitalized methods to research highlighting circular approaches.

The stories from individuals who have made significant contributions to driving forward Chemical Leasing at the global level are particularly inspiring.

With this Global Chemical Leasing Award 2018 Highlights report we want to share moments and emotions of the award, feature the outstanding work and profiles of the winners and inspire more companies and individuals to commit to innovative and circular solutions, to commit to change, and last but not least, to commit to Chemical Leasing.

Many thanks to all who have contributed to the Global Chemical Leasing Award 2018.

Sincerely,

Global Chemical Leasing Team
CHEMICAL LEASING – AN INNOVATIVE CIRCULAR ECONOMY BUSINESS MODEL FOR A SUSTAINABLE FUTURE

Chemicals are used in a large variety of products and processes. The chemical industry is one of the world’s largest manufacturing sectors and is growing significantly. Global chemical sales are expected to grow from €3.4 trillion in 2016 to €6.3 trillion in 2030.

We see a great movement towards circularity with a growing appetite for resource-efficient and environmentally friendly products, and new service and impact oriented business models. Policymakers are increasingly promoting innovation, research and development in the same direction.

REDUCTION IN CHEMICALS:
100% in case of substitution, average 30-40%

ENERGY AND CO2 REDUCTION:
UP TO 65%
average ≈ 30%

OTHER RESOURCES, PLASTIC AND PACKAGING:
UP TO 80%
average ≈ 60%

WATER REDUCTION / ELIMINATION:
UP TO 100%
average ≈ 50%
In a conventional business transaction, producers of chemicals are driven by the principle of "the more you sell, the more you earn". Chemical Leasing is based on an alternative business approach that basically turns the business model upside down and changes the business paradigm: i.e. profit doesn’t depend on more volume, but on less of it. Economic success no longer depends on the volume of chemicals sold, but on the service that the chemicals render, their performance. For example, payments are made for cleaned pieces rather than the tons of chemicals used for water purification, or for hectares of agriculture land free of pest rather than liters of pesticides used for the land treatment or payment per kg of yield. This new business model helps create win-win partnerships between chemical suppliers and buyers bringing mutual benefits, enhanced competitiveness and added value.

To close the gap between our high ambitions for sustainability and the business as usual today, we need to continue sharing best practices, stimulating innovation, and replicating success stories. In an effort to do so, the United Nations Industrial Development Organization (UNIDO) has been promoting Chemical Leasing in partnership with the Austrian Federal Ministry of Sustainability and Tourism (BMNT), the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU), the German Environment Agency (UBA), the Swiss State Secretariat for Economic Affairs (SECO) and the Swiss Federal Office for the Environment (FOEN) since 2004.

- Economic success no longer depends on the volume of chemicals sold, but on the service that the chemicals render, their performance.
- For example, payments are made for cleaned pieces rather than the tons of chemicals used for water purification, or for hectares of agriculture land free of pest rather than liters of pesticides used for the land treatment or payment per kg of yield.
WHO:
APPLICANTS FROM INDUSTRY, ACADEMIA, ENTREPRENEURS, AND A INTERGOVERNMENTAL ORGANIZATION

APPLICATIONS
91 APPLICATIONS

COUNTRIES
20 COUNTRIES
Let me take you on a journey, let me take you on our Chemical Leasing journey. How did it start? At UNIDO we always look for new ideas, for sustainable solutions to be applied in industry. When we started, we were working on closing the loops and cleaner production and we were searching for new business models to achieve a win-win situation for economy and environment, targeting developing and transition countries. But conventional business models do seldomly or do not sufficiently inspire innovation, nor do they very often inspire sustainable use of chemicals and other resources. Why is this the case? Because of the principle ‘the more you sell, the more you earn’. And we saw that we had to change this. There was a need for a paradigm change, and we saw this in Chemical Leasing. In 2004 we started, together with the Austrian government, the Global Chemical Leasing Programme. Demonstration cases, capacity building and awareness raising together with our National Cleaner Production Centres (NCPCs) were the first steps. We developed the definition of Chemical Leasing, wrote a book on selling services instead of barrels and produced the first toolkit. Our work was very much supported by the launching of the Strategic Approach to International Chemicals Management (SAICM) in Dubai in 2006 where we presented Chemical Leasing for the first time. Then, Germany and Switzerland joined our work and gave it a tremendous boost.

With all that we did we found that something was missing: the hidden cases. We know which companies implemented Chemical Leasing but which might label it differently. So what did we do? We started with the Global Chemical Leasing Award in 2010 and continued in 2012, 2014 and 2018. Today we have: 3 new countries join the Declaration, “Circular economy business model”, Trends and Industry 4.0, Mainstreaming in certain processes, Contribution to SDGs, Book: Success story in industry.
It is the fourth time we are gathering to have the Global Chemical Leasing Award Ceremony. You will be inspired by the sheer multitude of companies, industry and sectors who are applying this business model. Selling services instead of barrels, this is the secret, making it eco-efficient and economically profitable. The magic word is collaboration.

While implementing Chemical Leasing we experience side effects we originally did not expect. One was that we see remarkable improvement of worker conditions where Chemical Leasing is applied. There are many aspects where we see that Chemical Leasing does manage really to comfort all three sustainable pillars.
Digitalization, globalization, changing patterns of consumption and production have increased environmental concerns and created new challenges and opportunities for companies worldwide. Chemical Leasing creates a perfect business environment to tackle challenges in a changing global context and offers concrete solutions for sound management of chemicals, reduction of emissions and using resources in a very efficient way. You want to create something meaningful. A true innovation has a potential to make a change in the world and Chemical Leasing does this. This service-based business model makes obvious how circular economy can be turned into an economic success. It is only that within this concept all parties along the supply chain share responsibility and one economic goal: resource efficient production and use of chemical products.
As the ICCM5 president, from my point of view Chemical Leasing is a really important contribution to our efforts in reaching sound management of chemicals and waste in the future. As you know, we face global continuous trends of both population growth and increase of chemical production. The chemical production is projected to double from 2025 to 2050. This puts huge pressure on resources’ demand of chemicals and waste management. A key challenge for the coming years is to deal with the trends in a way that chemicals are handled responsibly, waste is prevented and recycling is increased. The international community needs to foster sustainable chemistry innovations to ensure that, throughout their life cycle, chemicals do not cause harm on health and environment. Chemical Leasing is an innovative business approach to foster sustainability. It already is an important part of the work of UNIDO, Austria, Switzerland and Germany to illustrate lucrative opportunities of sustainable chemistry and to promote these ideas in industry worldwide.

GERTRUD SAHLER
Chemical Leasing is such an innovative business model. It promotes the sustainable management of chemicals by shifting the focus from increasing the sales in volume of chemicals towards the delivery of services to reach more efficient use of chemicals. It is not a new model, it has a long tradition and many experts who have worked for many years in this field very successfully. It also has a long tradition in certain sectors and many countries. To demonstrate our commitment to this goal, Switzerland signed the Joint Declaration of Intent on Chemical Leasing together with Germany, Austria and UNIDO in Vienna in 2016. We are very pleased to learn that El Salvador, Sri Lanka and Serbia decided to join this endeavour and will also sign the declaration. The large number of applications from many countries underlines that Chemical Leasing is applied by many companies worldwide in many different sectors.
I can see way and the steps of Chemical Leasing. I would like to put on record UNIDO’s appreciation of the excellent cooperation we have with Austria, Switzerland and Germany. The basic idea started with Austria; Germany and Switzerland then joined. It has been a very fruitful association and we are so glad to see now that the whole idea of Chemical Leasing has taken root and has been mainstreamed in a number of industries and sectors. Now we see that in so many industries we have a service that substitutes a transaction that was until then bound to products. It is quite rewarding to see that initially some 10 to 15 years ago the concept of Chemical Leasing was born here. I am glad to see that over the years the scheme has greatly expanded and we are fortunate to have solid partners such as the Yale University with us. I see that in the fourth edition of this Award, the number of countries as well as the number of applications has tremendously increased. We see that Chemical Leasing appears in different domains and different countries and this shows how mainstreamed the concept has become.
This award ceremony is recognizing people who have done tremendously hard work, but that’s not the end of the story. It was not just the hard work that was done, it was the vision. It was the vision to say “maybe we can do things differently”. It was the vision of UNIDO and its partners to support this important change and thinking, to step back from the status quo and say ‘maybe it is actually true that nobody bought a chemical… they bought a performance, they bought the function, they bought the service’. To be able to step back and say maybe our business models are not exactly optimal, there are ways of doing things that are not only more profitable, more efficient, more effective but also reduce harm to human health and nature.

PAUL ANASTAS
Founder of the 12 Principles of Green Chemistry, Director of Yale University’s Center for Green Chemistry and Green Engineering, US
Inspiring! This experience I will cherish for the rest of my life.

Mirela Siqueira
Environmental Coordinator, Groupe PSA

For my country, Colombia, it was such a memorable moment: our companies got two awards for the excellent Chemical Leasing projects demonstrating great results in terms of sustainability and proper handling of chemicals.

Paula Hoyos Cadavid
Chemical Leasing consultant

A wonderful reward for the hard work achieved. An incentive to further develop the implementation of Chemical Leasing in Brazil.

Ana Oestreich
Chemical Leasing consultant
CASE STUDIES: AWARD FOR EXCELLENCE IN APPLYING CHEMICAL LEASING TO A SURFACE TREATMENT PROCESS

Crown Beverages Ltd, Uganda

New payment basis: Uganda shillings/Lt of beverage packaged in returnable glass bottles/PET bottles

Ecolab LLC, Ukraine

New payment basis: € per hectoliter of produced beverages

CJSC “Radomyshl Brewery”, Ukraine

New payment basis: € per hectoliter of produced beverages
CASE STUDIES: AWARD FOR EXCELLENCE IN APPLYING CHEMICAL LEASING TO A CLEANING PROCESS

Valamar Riviera D.D, Laundry North Poreč, Croatia
New payment basis:
€ per kg of washed laundry

FKL d.o.o. Temerin, Serbia
New payment basis:
€ per month (three shifts, seven days weekly)

Ecolab d.o.o., Croatia
New payment basis:
€ per kg of washed laundry

Ravago Chemicals d.o.o., Serbia
New payment basis:
€ per month (three shifts, seven days weekly)
CASE STUDIES: AWARD FOR EXCELLENCE IN APPLYING CHEMICAL LEASING

Metalicos Jotavel LTDA, Colombia

New payment basis: $ per m² of treated surface (degreasing and protection against corrosion)

Groupe PSA, Brazil

New payment basis: R$ per car body painted plus taxes

Green Chemicals, Brazil

New payment basis: R$ per car body painted plus taxes

MAS Active (Pvt) Ltd–Linea Intimo, Sri Lanka

New payment basis: Treated water volume: cubic meters (m³)
SPECIAL INNOVATION: AWARD FOR EXCELLENCE IN DEVELOPING A TECHNICAL SOLUTION FOR THE APPLICATION OF CHEMICAL LEASING

Noyon Lanka (pvt) Ltd, Sri Lanka
New payment basis: Per meter cubic ($m^3$) of effluent water

Electroquimica West S.A., Colombia
New payment basis: $ per reflector unit that enters the anodizing plant

Henkel Srbija D.O.O., Serbia
New payment basis: € per number of labeled bottles (or hl of beverage, beer), brand depending
RESEARCH: AWARD FOR EXCELLENCE IN RESEARCH ON CHEMICAL LEASING

Department Of General Ecology And Ecotrophology Bila Tserkva National Agrarian University, Ukraine

For developing the Chemical Leasing Curriculum

University Of Nottingham, United Kingdom

For excellence in research related to Chemical Leasing

Environment, Health And Safety Division, OECD, France

For excellence in research on Chemical Leasing
A special thanks to our donors who have supported the Chemical Leasing concept from the very beginning and have co-organized the Global Chemical Leasing Award 2018 together with UNIDO:

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

Federal Ministry Sustainability and Tourism

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Office for the Environment FOEN

State Secretariat for Economic Affairs SECO