

# IERC 2018

## 17<sup>th</sup> International Electronics Recycling Congress IERC 2018

January 17 – 19, 2018, Salzburg, Austria



**LET'S MAKE  
ELECTRONICS  
GREENER**

### Patronage:

- DIGITALEUROPE
- EucoLight
- European Committee of Domestic Equipment Manufacturers (CECED)
- European Electronics Recyclers Association (EERA)
- Federal Ministry of Agriculture, Forestry, Environment and Water Management, Austria
- Global Lighting Association
- Japan Electronics and Information Technology Industries Association (JEITA)
- PlasticsEurope
- Verband Deutscher Metallhändler e.V. (VDM)
- WEEE Forum



## WELCOME ADDRESS

Picture: BMLFUW/Newman



### ANDRÄ RUPPRECHTER

Federal Minister for  
Agriculture, Forestry,  
Environment and  
Water Management

As the market continues to expand and innovation cycles become even shorter, the replacement of equipment accelerates, making EEE a fast-growing source of waste. While Directives 2002/95/EC and 2011/65/EU have contributed effectively to reducing hazardous substances contained in new EEE, including mercury, cadmium, lead, hexavalent chromium, phthalates, polychlorinated biphenyls (PCBs) and ozone-depleting substances will still be present in WEEE for many years. Hazardous components in EEE are a major concern during the waste management phase, and recycling of WEEE is not undertaken to a sufficient extent. A lack of recycling results in the loss of valuable resources.

The material recovery and the closed resource loop – known as “Circular Economy” – will become more and more impor-

tant for the whole industry and production countries. Therefore, the purpose of Directive 2012/19/EU is to contribute to sustainable production and consumption by, as a first priority, the prevention of WEEE and, in addition, by the re-use, recycling, and other forms of recovery of such wastes as to reduce the disposal of waste and to contribute to the different use of resources and the retrieval of valuable secondary raw materials. It also seeks to improve the environmental performance of all operators involved in the life cycle of EEE, e.g. producers, distributors and consumers and, in particular, those operators directly involved in the collection and treatment of WEEE.

Implementing the Directive, efforts must be reinforced to fulfill the WEEE minimum collection target rates which will become effective in 2019.

Improved national and international efforts will support the implementation of the environmentally compatible management of WEEE in accordance with the obligations of the Basel Convention resulting in a more effective prevention of illegal shipment of WEEE as well.

The WEEE Directive set reliable standards and also formed a good basis for investment. In the meantime, a whole secondary industry has evolved with recycling systems and the creation of different treatment standard. However, the dynamic of industrial developments constantly poses new challenges. For instance the increasingly widespread use of high energy batteries – lithium-ion-batteries in particular – in EEE is a driving force to adapt safety requirements on collection, storage, transport and treatment of WEEE containing these batteries.

The IERC has become the most important and effective platform for WEEE in Europe, creating an environment that fosters dialogue on the many issues facing the recycling industry. We can look forward to many interesting presentations, exhibitions, workshops, plant tours as well as mutually fruitful discussions and collaborations. I wish everybody a successful and a nice stay in Salzburg.





## FOREWORD

### JEAN COX-KEARNS

Chairman of the Steering  
Committee IERC

**To those of you returning to the IERC welcome once again to Salzburg, for those of you who are here for the first time we welcome you to this city which is now recognized as a UNESCO World Heritage site and is the home of "Amadeus Mozart" and "Red Bull".**

On behalf of the Steering Committee and Conference Organizer's I welcome you all to Salzburg in January 2018 for our 17<sup>th</sup> International Electronics Recycling Congress.

This is our 11<sup>th</sup> year to be hosted in the Salzburg Conference Centre and we will again this year welcome our many delegates who come from all around the world representing Electronics Recycling, Equipment Manufacturers, the makers of Recycling equipment, Associations, standards bodies, NGO's and of course the creators of

the regulations that form the basis of how we work. The Congress Centre in Salzburg, located just beside the Salzach river and just a short stroll from the historic city overlooked by the Hohensalzburg Castle provides us with a location that enables deals to be done and discussions to be had on topics that impact our industry and the industries that support us. The pace of developing regulations has slowed somewhat over the past couple of years but that does not mean the challenges have lessened. As we enter 2018 we do so with many business topics to discuss, not least China's intention to ban the imports of certain wastes or how to comply with India's revised recycling regulation which now has targets. Hopefully IERC 2018 will provide a forum for interaction that helps us all to make positive progress.

Is Brexit impacting the recycling Industry in Europe? Will the exit of Britain from Europe mean changes in regulations in what was one of the bigger EU markets? Will the flow of recycled materials be more difficult?

Hopefully our Economist Keynote speaker David McWilliams can shed light here.

In the U.S. are we seeing less focus on the Environment from the perspective of the administration, what does that mean for producers and the recycling industry?

The circular economy focus looks to be here to stay with more and more integration of circular economy principles in the management of end of life products to ensure maximum re-use of products, parts and materials. We have already seen a number of initia-

tives regarding the re-use of plastics, this year we hope to share how the circular economy solutions are progressing to other materials.

While we are not seeing many new regulations we continue to see collection targets increase or see targets implemented where before programs were voluntary.

An initiative that commits funding of over €650 million under Horizon 2020 and €5.5 billion under the structural funds – How is the recycling industry benefitting from this?

At IERC we believe we have a great line up of speakers and topics for you and hopefully we can deliver some more of the wonderful white snow that we had last year. I look forward to seeing you there.





## INTERNATIONAL STEERING COMMITTEE



**JEAN COX-KEARNS**  
**Chairman of the Steering Committee IERC**  
OTE Consulting  
Director  
Ireland



**MANFRED FAHRNER**  
ALBA Electronics  
Recycling GmbH  
Chief Sales Officer  
Germany



**PROF. HSIAO-KANG MA**  
National Taiwan University  
Department of Mechanical Engineering  
Taiwan



**SCOTT VENHAUS**  
Arrow Electronics, Inc.  
Director, Global Sales Enablement & APJ Sales  
USA



**JONATHAN PERRY**  
**Vice Chairman of the Steering Committee IERC**  
Dell, Producer Responsibility  
Compliance Consultant  
United Kingdom



**DR SVEN GRIEGER**  
EARN Elektroaltgeräte  
Service GmbH  
Manager WEEE Services  
Germany



**VENKATESHA MURTHY**  
Vans Chemistry Pte. Ltd.  
Managing Director  
Singapore



**JAN VLAK**  
WEEE Forum  
President  
Belgium



**STEPHANE BURBAN**  
**Chairman of the Lecture Group**  
Glencore International AG  
Switzerland



**DR JACO HUISMAN**  
Leiden University  
Associate Professor, Institute  
of Environmental Sciences  
(CML)  
Netherlands



**MARTIJN REINTJES**  
Recycling International  
Chief Editor  
Netherlands



**NORBERT ZONNEVELD**  
EERA  
Executive Secretary  
Netherlands



**DR MARCO BULETTI**  
Federal Office for the  
Environment (FOEN), Waste  
Recovery and Treatment  
Section, Deputy Head of  
Section, Switzerland



**STEPHAN KRAFZIK**  
Online-Magazin 320°  
Publisher & Chief Editor  
Germany



**HANNA SCHWEITZ**  
Boliden Smelters  
Manager Secondary  
Raw Materials  
Sweden



**ROGER BURRI**  
Metal Depot Zurich AG  
CEO  
Switzerland



**PASCAL LEROY**  
WEEE Forum  
Secretary General  
Belgium



**THIERRY VAN KERCKHOVEN**  
Umicore Precious Metals  
Refining, Global Sales  
Head of Supply Recyclables  
Belgium

# Fridge Disposal



**URT Umwelt- und Recyclingtechnik GmbH**  
Am Hammersteig 5a, 97753 Karlstadt, Germany  
Fon +49 93 53 / 90 68 -0, Fax +49 93 53 / 90 68 -68  
[www.urt-recycling.com](http://www.urt-recycling.com), [info@urt-recycling.de](mailto:info@urt-recycling.de)

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Flame retardants are essential  
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- Textiles and Furnitures

pinfa is the Phosphorus, Inorganic and Nitrogen Flame Retardants Association and is a Sector Group within Cefic, the European Chemical Industry Council



[www.pinfa.org](http://www.pinfa.org)



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**GEODIS Logistics Deutschland GmbH**

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IT Rollout & Repair

**Düsseldorf**  
Spare Parts

**Dresden**  
Repair

**Nieder-Olm**  
Recycling



## LOCATION OF THE CONGRESS



The 17<sup>th</sup> International Electronics Recycling Congress IERC 2018 will be held at the:

**Salzburg Congress**  
Auerspergstrasse 6  
5020 Salzburg, Austria

Phone +43 662 889870  
Fax +43 662 88987210  
[www.salzburgcongress.at](http://www.salzburgcongress.at)



**Salzburg Congress** is located in the centre of Mozart's city. Only 15 minutes from Salzburg Airport and 10 minutes from train station by taxi or bus. Direct trains available from Munich Airport ([www.bahn.de](http://www.bahn.de)) and Vienna Airport ([www.oebb.at](http://www.oebb.at)).



### Salzburg – The city of Mozart

UNESCO nominated Salzburg's city centre as part of the world's cultural and natural heritage. Now the city officially ranks among the most beautiful cities in the world, certainly one deserving a high degree of protection.

[www.salzburg.info](http://www.salzburg.info)

A number of rooms are held at a discounted rate by registering **before December 15, 2017** for the participants. If you wish, you may also extend your stay at the same rates.

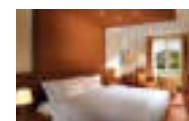
### IMPORTANT NOTICE:

We have been alerted that unofficial housing providers are trying to contact IERC delegates and exhibitors claiming to be associated to ICM and can secure hotel rooms at designated IERC hotels in Salzburg. These companies are not authorized to represent ICM nor IERC. Please note that we have no affiliation with any housing coordinator. If you have any concerns, contact us at [info@icm.ch](mailto:info@icm.ch).

## HOTEL ACCOMMODATION



**Hotel Sheraton Grand Salzburg \*\*\*\*\***  
Phone +43 662 889990  
[www.sheratongrandsalzburg.com](http://www.sheratongrandsalzburg.com)  
next to Salzburg Congress



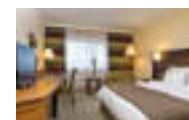
**Hotel Bristol Salzburg \*\*\*\*\***  
Phone +43 662 873557  
[www.bristol-salzburg.at](http://www.bristol-salzburg.at)  
5 minutes walking distance to Salzburg Congress



**Hotel CROWNE PLAZA Salzburg – The Pitter \*\*\*\***  
Phone +43 662 889780  
[www.crowneplaza.com/Salzburg](http://www.crowneplaza.com/Salzburg)  
2 minutes walking distance to Salzburg Congress



**Hotel Wyndham Grand \*\*\*\***  
Phone +43 662 46880  
[www.wyndhamgrandsalzburg.com](http://www.wyndhamgrandsalzburg.com)  
10 minutes walking distance to Salzburg Congress



**Hotel IMLAUER & Bräu\*\*\*\*** (non smoking hotel)  
formerly Best Western Hotel Imlauer  
Phone +43 662 88992  
[www.imaluer.com/hotels/hotel-imaluer-salzburg](http://www.imaluer.com/hotels/hotel-imaluer-salzburg)  
5 minutes walking distance to Salzburg Congress



**Hotel Achat Plaza Zum Hirschen \*\*\*\***  
Phone +43 662 889030  
[www.zumhirschen.at](http://www.zumhirschen.at)  
5 minutes walking distance to Salzburg Congress



**Austria Trend Hotel Europa\*\*\*\***  
Phone +43 662 8899300  
[www.austria-trend.at/de/hotels/salzburg/europa-salzburg](http://www.austria-trend.at/de/hotels/salzburg/europa-salzburg)  
10 minutes walking distance to Salzburg Congress



**Motel One – Mirabell\*\*\***  
Phone +43 662 885200  
[www.motel-one.com](http://www.motel-one.com)  
10 minutes walking distance to Salzburg Congress



## GUEST SPEAKER

**“The Age of Disruption”**

### DAVID MCWILLIAMS

Author, Journalist,  
Lecturer, Broadcaster and  
Documentary Maker  
Ireland

An uncompromising thinker,  
with a relaxed, confident  
and entertaining style



**Ranked 11<sup>th</sup> most influential Economist in the world  
by Richtopia in 2016**

He is a regular conference and keynote speaker at international financial conferences where he speaks about trends in the global economy and how we might profit from them. He speaks to businesses and industrial groups on how the trends in growth, currencies and financial markets will uniquely affect them.

Consistently accurate in his forecasts, David McWilliams accurately forecasted the strong UK Brexit vote, he was also the first economist to identify the Irish boom as nothing more than a credit bubble, warning of its collapse and the consequences for the country. His objective is to make economics as widely available and easily understandable on as many platforms as possible.

[www.davidmcwilliams.ie](http://www.davidmcwilliams.ie)

**“Great Chances of Circular  
Economy in China”**

### PROF. JINHUI LI

Basel Convention Regional Centre  
for Asia and the Pacific  
Executive Director

Tsinghua University  
Professor  
China



Prof. Li serves as a negotiation expert for Chinese Government on chemical, waste and renewable energy international conventions and platform. Meanwhile, Prof. Li is the Director of the Circular Economy of Chinese Society for Environmental Sciences; Expert Committee of “Urban Mining” Innovation Development Alliance, China Association of Circular Economy; Director of Environment Management Professional Committee,

Society of Management Sciences of China; Steering Committee Member of Solving the E-Waste Problem (StEP), the United Nations University.

His research direction is Circular Economy and Urban Mining, management and policy of chemicals and waste.

Prof. Li won the second class prize of Science and Technology Progress Award, the State Council

of the People's Republic of China with the research of “Development and application of Urban Circular Economy development of generic technology” in 2016. He has won about 30 prizes in national, provincial and personal level.

Prof. Li has published over 300 academic papers while 7 papers were listed as highly cited paper by the Web of Science ESI.





## WHO SHOULD ATTEND?



- Original electronic equipment manufacturers (OEMs)
- Electronic equipment importers and dealers
- Reuse & refurbishment organizations
- Schemes and take back organizations
- Ferrous & non-ferrous metal traders
- Collection and transportation companies
- Recycling and dismantling companies
- Shredding companies
- Plastics industry
- Battery industry
- Non-ferrous metal industry
- Ferrous and stainless steel industry
- Environmental authorities
- Universities and research institutes
- Laboratories for material science
- Investors
- Consultants



## CONGRESS SCHEDULE

Time	Room "Europe" (2 <sup>nd</sup> floor)	Room "Mozart" (ground floor)	Exhibition Hall (1 <sup>st</sup> floor)
Tuesday, January 16, 2018			
17.00 – 19.00	Pre-Registration in the exhibition hall		
Wednesday, January 17, 2018			
08.00 – 09.30	Registration and welcome coffee in the exhibition hall		
09.30 – 09.45	Welcome and Introduction		Exhibition
09.45 – 10.45	Guest Speaker		
10.45 – 11.15	Coffee break in the exhibition hall		
11.15 – 12.00	Keynote Speaker		
12.00 – 12.15	Presenting of the "IERC HONORARY AWARD"		
12.15 – 14.00	Lunch in the exhibition hall		
14.00 – 15.30	Industry Economics	Plastics Recycling	
15.30 – 16.00	Coffee break in the exhibition hall		
16.00 – 17.00	Circular Economy	Recycling of Renewable Energy Equipment	
from 17.00	Cocktail reception in the exhibition hall sponsored by "Pooling Partners"		
from 19.00	Networking dinner		
Thursday, January 18, 2018			
08.00 – 09.00	Welcome coffee in the exhibition hall		
09.00 – 10.30	Country Reports	Sorting & Separation Technologies	Exhibition
10.30 – 11.00	Coffee break in the exhibition hall		
11.00 – 12.30	Critical Raw Materials	New Treatment Processes	
12.30 – 14.00	Lunch in the exhibition hall		
14.00 – 15.00	Impact of Data Security and Reverse Management Solutions	Process Innovations	
15.00 – 15.30	Coffee break in the exhibition hall		
15.30 – 16.30	Round Table		
from 16.30	Farewell cocktail in the exhibition hall sponsored by "Pooling Partners"		
Friday, January 19, 2018			
	Workshops:		Hotel Sheraton
09.00 – 12.30	"Lithium Batteries Transport & Safety Issues"		
09.00 – 12.30	"Prospecting Secondary Raw Materials"		
	Plant Tours:		Buses leaving in front of the Hotel Sheraton
08.00 – 16.45	EAR – Elektronik-Altgeräte-Recycling, Pfaffenhofen		
08.30 – 14.45	Montanwerke Brixlegg AG, Brixlegg		
08.00 – 17.15	Müller-Guttenbrunn, Metran and MBA Polymers Austria, Amstetten/Kematen		



LET'S MAKE  
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## CONGRESS PROGRAM

### TUESDAY, JANUARY 16, 2018

17.00 – 19.00 Pre-Registration in the exhibition hall

### WEDNESDAY, JANUARY 17, 2018

08.00 – 09.30 Registration and welcome coffee in the exhibition hall

#### 09.30 – 09.45 Welcome and Introduction

**Jean Cox-Kearns, Chairman of the Steering Committee**

#### 09.45 – 10.45 GUEST SPEAKER

"The Age of Disruption"

**David McWilliams, Author, Journalist, Lecturer, Broadcaster and Documentary Maker, Ireland**  
**Ranked 11<sup>th</sup> Most Influential Economist in the World (Richtopia, 2017)**

10.45 – 11.15 Coffee break in the exhibition hall

#### 11.15 – 12.00 KEYNOTE SPEAKER

"Great Chances of Circular Economy in China"

**Prof. Jinhui Li, Executive Director of Basel Convention Regional Centre for Asia and the Pacific**  
**Professor of Tsinghua University, China**

#### 12.00 – 12.15 PRESENTING OF THE "IERC HONORARY AWARD"

12.15 – 14.00 Lunch in the exhibition hall

#### Industry Economics

**Session Chairman: Stephan Krafzik, Online-Magazin 320°, Germany**

14.00 – 14.30 "Determinants of E-Waste Recycling: Comparison of Structural, Financial and Psychological Interventions"  
**Dr Alexandra Kibbe, Otto-von-Guericke-Universität Magdeburg, Germany**

14.30 – 15.00 "Evolving WEEE-Treatment Requirements in Germany – Recycle Resources, Remove Hazardous Substances"  
**Dr Sina Kummer, German Environment Agency, Germany**

15.00 – 15.30 "WEEE Recycling Economics – The Short Comings of the Current Business Model"  
**Dr Jaco Huisman, United Nations University – ViE - SCYCLE, Bonn, Germany**

15.30 – 16.00 Coffee break in the exhibition hall

#### Circular Economy

**Session Chairman: Dr Sven Grieger, EARN Elektroaltgeräte Service GmbH, Germany**

16.00 – 16.30 "Scaling the Circular Economy"  
**Jonathan Perry, Dell, United Kingdom**

16.30 – 17.00 "Sustainable Operations"  
**Hanna Schweitz, Boliden Smelters, Sweden**

#### Plastics Recycling

**Moderator: Pascal Leroy, WEEE Forum, Belgium**

"How to Boost the Reuse of Plastics in the Electronics Industry"  
**Clemens Kitzberger, EREMA Group GmbH, Austria**

"Recycling of Plastics Containing PIN (Non-Halogenated) Flame Retardants – State of the Art, Technology and Legislation"  
**Dr Philippe Salémis, pinfa (Phosphorus, Inorganic, Nitrogen Flame Retardants Association), Belgium**

"The Crucial Role of Optical Sorting in Plastics Recycling"  
**Thomas Neureiter, Bühler AG, Austria**

#### Recycling of Renewable Energy Equipment

**Moderator: Venkatesha Murthy, Vans Chemistry Pte. Ltd, Singapore**

"Can Solar Enlght the WEEE Landscape?"  
**Jan Clyncke, PV CYCLE aisbl, Belgium**

"Treatment and Recycling of Wind Turbine Rotor Blades (Glass and Carbon Fiber Reinforced Plastics)"  
**Klaus Wollner, Veolia Umweltservice West GmbH, Germany**

from 17.00 Cocktail reception in the exhibition hall sponsored by:

from 19.00 Networking dinner "Moulin Rouge"

**PP**  
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TECH  
TALKS

TECH  
TALKS

# CONGRESS PROGRAM

THURSDAY, JANUARY 18, 2018

08.00 – 09.00 Welcome coffee in the exhibition hall

	<b>Country Reports</b> Session Chairman: Martijn Reintjes, Recycling International, Netherlands	<b>Sorting &amp; Separation Technologies</b> Moderator: Manfred Fahrner, ALBA Electronics Recycling GmbH, Germany
09.00 – 09.30	"The Ghana Export Market" <b>Emmanuel Nyalety, Good Point Recycling, Ghana</b>	"Joined Forces – The Ultimate Separation Including Screen, Wind-shifter, Optical and Meet Max-All!" <b>Cor Groen, BHS Europe / Nihot / NRT, Netherlands</b>
09.30 – 10.00	"India – Impact of an Updated Regulation" <b>Patrick Wiedemann, Reverse Logistics Group, Germany</b>	"Highly Flexible WEEE Recycling with Multi Sensor Sorting Technology" <b>Karl Hoffmann, Steinert GmbH, Germany</b>
10.00 – 10.30	"Russian Waste Management Reform: How Does Recycling Fit into it" <b>Maxim Kalinin, Baker McKenzie, Russia</b>	"Precious Metal Recovery from Dust" <b>Mario Zöllig, swissRTec AG, Switzerland</b>

TECH  
TALKS

10.30 – 11.00 Coffee break in the exhibition hall

	<b>Critical Raw Materials</b> Session Chairman: Jonathan Perry, Dell, United Kingdom	<b>New Treatment Processes</b> Moderator: Thierry Van Kerckhoven, Umicore Precious Metals Refining, Belgium
11.00 – 11.30	"The Challenges and Opportunities for Lamp Recycling in the Next Five Years" <b>Marc Guiraud, EucoLight AISBL, Belgium</b>	"Urban Mining with the Highest Flexible System for Complex Resources, Based on a State-of-the-Art Installation in Italy" <b>Dirk Leupold, UMS - Urban Mining Solutions GmbH, Germany</b>
11.30 – 12.00	"Increase the Recovery of Critical Raw Materials (CRM) from WEEE. ECODOM Italian Trial: From Innovative Collection to Innovative Treatments" <b>Luca Campadello, ECODOM, Italy</b>	"Treatment of Refrigerators at the State of the Art within the Legislative Framework of the New Austrian Waste Treatment Ordinance" <b>Dr Christian Keri, SEG Umwelt-Service GmbH, Germany</b>
12.00 – 12.30	"Recycling & Availability of Metals and Impact on Supply and Demand" <b>Donna Vareha-Walsh, Indium Corporation, USA</b>	"Recycling Possibilities of Tantalum from E-Scrap" <b>Dr Dirk Schöps, ELPRO Umweltservice GmbH, Germany</b>

TECH  
TALKS

12.30 – 14.00 Lunch in the exhibition hall

	<b>Impact of Data Security and Reverse Management Solutions</b> Session Chairman: Stephane Burban, Glencore International AG, Switzerland	<b>Process Innovations</b> Moderator: Jan Vlak, WEEE Forum, Belgium
14.00 – 14.30	"Electronics Recycling in USA and Global Input – A View from the USA" <b>Kevin J. Dillon, Electronic Recyclers International, Inc., USA</b>	"Enabling the Recycling of High-Tech Metals – Joined Treatment of Halogenated Plastics with Metal Containing Fractions" <b>Dr Peter Hense, Fraunhofer UMSICHT, Germany</b>
14.30 – 15.00	"The Benefits of a Strong Reverse Supply Chain Management Solution" <b>Linda Li, Li Tong Group, Hong Kong</b>	"Beyond Traditional Recycling: Usage of Technology into Traditional Recycling Processes" <b>Dr Alexandre Comino, Hellatron Recycling Division, Italy</b>

TECH  
TALKS

15.00 – 15.30 Coffee break in the exhibition hall

15.30 – 16.30	<b>Round Table</b>  "Who will be the Winners from the Ever Increasing E-Waste Volumes?"  <b>Moderator:</b> <b>Norbert Zonneveld, European Electronics Recyclers Association (EERA), Netherlands</b>  <b>Participants:</b> <b>Europe: Stephan Schwarz, ALBA International Recycling</b> <b>China: Prof. Jinhui Li, Tsinghua University, China</b> <b>Middle East &amp; Africa: Stuart Fleming, EnviroServe</b> <b>USA: Steve Skurnac, Sims Recycling Solutions (invited)</b>
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from 16.30 Farewell cocktail in the exhibition hall sponsored by:

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## CONGRESS PROGRAM

FRIDAY, JANUARY 19, 2018

### Workshops

09.00 – 12.30 "Lithium Batteries Transport & Safety Issues"

**Moderator: Dr Jean-Pol Wiaux, Consultant, Switzerland**

09.00 – 12.30 "Prospecting Secondary Raw Materials"

**Organizer: WEEE Forum**

### Plant Tours

08.00 – 16.45 **EAR – Elektronik-Altgeräte-Recycling West GmbH, Pfaffenhofen**

08.30 – 14.45 **Montanwerke Brixlegg AG, Brixlegg**

08.00 – 17.15 **Müller-Guttenbrunn, Metran & MBA Polymers Austria, Amstetten/Kematen**

## FPP 60 – Cutting Edge Technology in Flat Panel Dismantling



**INCREASE EFFICIENCY AND PROFITABILITY** by trusting MRT experience and equipment, conforming to WEEELABEX regulations for Mercury containing waste.

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ADDRESS: MRT System, Lumavägen, SE-371 47 Karlskrona, Sweden.  
PHONE: +46 455 30 28 70 E-MAIL: [info@mrtssystem.com](mailto:info@mrtssystem.com)  
WEBSITE: [www.mrtssystem.com](http://www.mrtssystem.com)



# MOULIN ROUGE



Paris 1889 – let's revive the variety of Moulin Rouge!

Join us on *Wednesday, January 17* at a colourful networking dinner accompanied by a fantastic live band and great show acts.

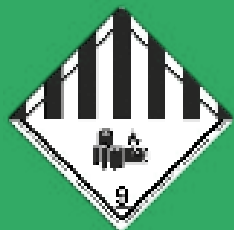
Do not miss this perfect opportunity to socialize with your friends and register for this evening today!



## DÎNER SPECTACLE



# WORKSHOP



## Lithium Batteries Transport & Safety Issues

<b>Moderator</b>	Dr Jean-Pol Wiaux, Consultant, Switzerland
<b>Contributors</b>	Johan Van Peperzeel, Van Peperzeel bv, NL Dr Claude Chanson, RECHARGE, Belgium Alois Grinschgl, Saubermacher, Austria Dr Marco Ottaviani, ANIE-CSI, Italy
<b>Date</b>	Friday, January 19, 2018
<b>Time</b>	09.00 – 12.30
<b>Location</b>	Hotel Sheraton, Salzburg
<b>Price</b>	EUR 150.– per person EUR 190.– per person after November 30, 2017 (incl. coffee break)

### PRELIMINARY AGENDA

1. From Prevention to Control
2. Lithium Batteries Properties and Safety Issues: Evolution of Packaging Requirements
3. Lithium Batteries and WEEE: A Challenging Issue
4. New ADR Requirements
5. Fire Protection: Active and Passive
6. The Implementation of Packaging Requirements for Batteries in Equipment: The Case of Austria
7. Conclusions

The workshop will concentrate on Lithium Batteries used in Electrical and Electronic Equipment.

It will review the major characteristics of a Lithium Battery (Primary and Rechargeable) that may lead to thermal runaway and development of a fire.

It will inform the participants about the hazards and risks associated with the handling, the storage and the transport of Lithium Batteries and for those contained in equipment. The objective of the workshop is also to supply Good Practices Guidance to the participants in order for them to take the appropriate measures to prevent an incident.

An update of the ADR regulation will be supplied. It will also describe the various means of first response in case of fire.

Participants will receive a certificate of attendance.

The workshop will be held with a minimum of 8 participants.

# WORKSHOP



## “WEEE Recycling Prospects – State-of-the-Art Data on Stocks and Flows of (Waste) Electrical and Electronic Equipment, Components and Materials in the Urban Mine”

At the workshop, participants will learn more about data availability for secondary, including critical, raw materials in WEEE.

<b>Organizer</b>	WEEE Forum
<b>Date</b>	Friday, January 19, 2018
<b>Time</b>	09.00 – 12.30
<b>Location</b>	Hotel Sheraton, Salzburg
<b>Price</b>	EUR 70.– per person EUR 90.– per person after November 30, 2017 (incl. coffee break)

### WHO SHOULD ATTEND THE WORKSHOP?

- WEEE recyclers
- Producer Responsibility Organizations
- EEE producers
- Researchers
- Policy makers

The ProSUM project, funded under the European Union's Horizon 2020 research programme, comes to an end in December 2017. Join us to see the results of three years' work to produce an inventory of secondary raw materials, hosted at the EU-Urban Mine Knowledge Data Platform. The inventory includes data on secondary raw materials for WEEE, batteries, end-of-life vehicles and mining wastes.

### AT THE WORKSHOP

- Learn about the most up-to-date and elaborate WEEE compositions datasets and intelligence on materials in the EU product categories as well as stocks and flows of WEEE within the EU.
- See a demonstration of how to use the EU-Urban Mine Knowledge Data Platform to generate charts and access reports.
- Hear how to overcome specific challenges in data availability.

For more information on the project see [www.prosumproject.eu](http://www.prosumproject.eu)

The workshop will be held with a minimum of 8 participants.

## EXHIBITORS

AS PER SEPTEMBER 30, 2017



## PLANT TOUR

FRIDAY, JANUARY 19, 2018

**EAR – ELEKTRONIK-ALTGERÄTE-RECYCLING,  
PFAFFENHOFEN**



**08.00** Departure by bus to Höpperger GmbH & Co. KG  
**11.00** Arrival at Höpperger GmbH & Co. KG  
**11.00 – 13.00** **Visit of the electronics recycling plant of EAR (Elektronik-Altgeräte-Recycling West GmbH)**  
**16.30\*** Arrival at Salzburg Airport  
**16.45\*** Arrival at Salzburg Congress

**The company EAR** (Elektronik-Altgeräte-Recycling West GmbH) is a subsidiary firm of the mother company Höpperger GmbH & Co. KG.

[www.hoepperger.at](http://www.hoepperger.at)

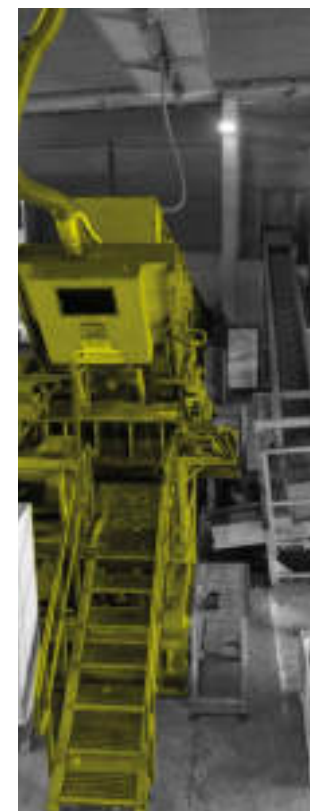
\* No guarantee on arrival time due to traffic conditions.  
The plant tour will only take place with a minimum of 8 participants.

**ear**  
elektronik  
altgeräte  
recycling  
west gmbh

The company EAR has set up the Europe-wide most modern small electronic device recycling plant with a capacity of 17.000 annual tons.

The heart of the plant is the so-called Querstromzerspaner, which can be filled with mixed electric and electronic scrap, without having to prepare or disassemble the material before.

Therefore all resources like iron, copper, aluminium and plastics can be recycled meaningfully.





## PLANT TOUR

FRIDAY, JANUARY 19, 2018

MONTANWERKE BRIXLEGG AG,  
BRIXLEGG



**08.30** Departure by bus to Montanwerke Brixlegg AG  
**10.30** Arrival at Montanwerke Brixlegg AG  
**10.30 – 12.30** **Visit of the copper smelter**  
**14.30\*** Arrival at Salzburg Airport  
**14.45** Arrival at Salzburg Congress

**Montanwerke Brixlegg AG** is Austria's only copper producer and has a history stretching back more than 500 years. Today Montanwerke is one of the leading secondary smelters in Europe.

Core business is recycling copper and other precious metals from scrap and in further steps process it into cathodes and billets. For these two highly pure copper products the total output is over 140'000 tons per year.

[www.montanwerke-brixlegg.com](http://www.montanwerke-brixlegg.com)

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RECOGNISED ALL OVER THE WORLD



Montanwerke Brixlegg AG is a secondary smelter and processes more than 160'000 tons of copper containing scrap. The products that result from this process provide the raw material for a wide range of application possibilities in various fields.

More information:

[www.montanwerke-brixlegg.com](http://www.montanwerke-brixlegg.com)



\* No guarantee on arrival time due to traffic conditions.  
The plant tour will only take place with a minimum of 8 participants.

Montanwerke Brixlegg AG  
Werkstraße 1 · 6230 Brixlegg · Austria  
Tel: +43 5337 6151 115 · Fax +43 5337 6151 102  
[office@montanwerke-brixlegg.com](mailto:office@montanwerke-brixlegg.com)

## PLANT TOUR

FRIDAY, JANUARY 19, 2018

MÜLLER-GUTTENBRUNN, METRAN & MBA  
POLYMERS AUSTRIA, AMSTETTEN/KEMATEN



08.00	Departure by bus to Müller-Guttenbrunn Group
10.30	Arrival at Müller-Guttenbrunn Group
10.30 – 15.00	<b>Visit of the shredder plant of Metall Recycling Müller-Guttenbrunn</b> <b>Visit of the metal separation plant of Metran</b> <b>Visit of the plastic recycling plant of MBA Polymers Austria</b>
17.00*	Arrival at Salzburg Airport
17.15	Arrival at Salzburg Congress

The **Müller-Guttenbrunn Group** is the largest E-Waste processor in Central and South Eastern Europe with an unprecedented recycling depth.

The **Müller-Guttenbrunn** facility in Amstetten de-pollutes the E-Waste with the patented Smasher™. After the de-pollution step a new and specialized shredder with a design capacity of 80,000 MT's recovers a high quality ferrous metal scrap with very little loss of copper and other non-ferrous metals in the ferrous fraction. The shredder residues are transported to Metran, a fully owned subsidiary of the Müller-Guttenbrunn Group.

**Metran** combines a large number of innovative separation technologies to further process these electronic shredder residues into a range of non-ferrous metal concentrates as well as printed circuit boards. Even metals <1 mm can thus be extracted from these residues to be re-introduced into the material cycle. In these processes a valuable plastics fraction is created, which is delivered to MBA Polymers Austria for further processing.

**MBA Polymers Austria** recovers high-quality post-consumer ABS, HIPS, PP and even PC-ABS resins for use in demanding applications. Premium grades are UL-HB recognized, impact modified and/or available in different colours – replacing virgin plastics and closing the circle for tech-plastics. These post-consumer plastics reduce energy consumption by over 80–90% and protect the environment by reducing up to 4,8 tons CO<sub>2</sub> emissions per metric ton of plastics produced, compared to the production of one ton of "virgin" plastics from petrochemicals. The MBA Polymers Austria plastics recycling facility covers approximately 20,000 m<sup>2</sup> and has a processing capacity of some 50,000 tons per year with a workforce of 100 people.

[www.mgg-recycling.com](http://www.mgg-recycling.com), [www.mba-polymers.at](http://www.mba-polymers.at)

\* No guarantee on arrival time due to traffic conditions.  
The plant tour will only take place with a minimum of 8 participants.



## WEEE recycling with unprecedented recycling depth



- Patented Smasher Technology for de-pollution
- Latest shredder and separation technologies
- Processing Shredder Residues
- Presence in Central and South-Eastern Europe

Müller-Guttenbrunn Group, Industriestrasse 12, A-3300 Amstetten, Austria  
Tel: +43 7472 / 64 181, Fax: +43 7472 / 64 181 38, [www.mgg-recycling.com](http://www.mgg-recycling.com), [office@mgg-recycling.com](mailto:office@mgg-recycling.com)



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fractions from  
durable goods ...



... to make  
post-consumer  
recycled  
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plastics



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Tel: +43 7476 77 488, Fax: +43 7476 77 488 44, [www.mba-polymers.at](http://www.mba-polymers.at), [office@mba-polymers.at](mailto:office@mba-polymers.at)

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**Poster presentation** (wall rental) **EUR 390.-**

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Space is limited, book today!



## LAYOUT EXHIBITION AS PER SEPTEMBER 30, 2017











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www.icm.ch

Participants registering and paying **before November 30, 2017** will benefit from a reduced registration fee. The registration fee includes congress, entrance to the exhibition, proceedings and luncheons.

REGISTER BY  
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## ORGANIZER



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Congress Assistant

## REGISTRATION FEES

### Congress fee

Fee for participants  
Fee for speakers  
Fee for students

	before Nov. 30, 2017	after Nov. 30, 2017
EUR	1'690.–	EUR 1'790.–
EUR	1'090.–	EUR 1'190.–
EUR	690.–	EUR 790.–

### Networking dinner (Jan. 17)

### Networking dinner for spouse (Jan. 17)

EUR	100.–	EUR 130.–
EUR	120.–	EUR 150.–

### Side events, you may choose one (Jan. 19)

#### Workshops:

Lithium Batteries Transport & Safety Issues  
Prospecting Secondary Raw Materials

EUR	150.–	EUR 190.–
EUR	70.–	EUR 90.–

#### Plant tours:

EAR – Elektronik-Altgeräte-Recycling  
Montanwerke Brixlegg AG  
Müller-Guttenbrunn Group

EUR	50.–	EUR 70.–
EUR	50.–	EUR 70.–
EUR	50.–	EUR 70.–

All prices excl. 20% Austrian VAT

Congress registration on site EUR 100.– surcharge

### Online registration

You may also register online at: <https://ierc.icm.ch/>

### Proceedings

If you cannot attend the congress, you may purchase the complete proceedings at EUR 350.–. Participants will get the proceedings free of charge.

### Payment

Payment should be made in EUR by bank transfer or by credit card.

## IERC HONORARY AWARD WINNERS SINCE 2007



**CHRISTIAN MÜLLER-GUTTENBRUNN** January 2017  
CEO of Müller-Guttenbrunn Group, Austria

Christian receives this award in recognition of his lifetime work, to develop new recycling processes and founding new Cleantech companies in Austria and Eastern Europe in various sectors such as plastics recycling and metal sorting. The prize also goes to the very innovative team of the Müller-Guttenbrunn Group, who have driven to implement new technologies to de-pollute E-Waste and upgrade recycled plastics for the industry.



**STEVE SKURNAC** January 2016  
Global President of Sims Recycling Solutions, USA

Steve receives this award for his achievements, support and dedication to the E-recycling industry. With a career spanning more than a quarter of a century, working in markets around the globe Steve has become a figurehead of an industry which historically managed waste but is now known as resource recovery or urban mining.



**RON GARAN** January 2015  
Impact CoLab, Retired NASA Astronaut, USA

Ron receives this award in recognition of his humanitarian spirit and work to improve our planet fostering collaborative efforts across global humanitarian organisations. He lived and worked in space for 178 days and has a unique perspective of our impact on the earth from space. He believes that appropriately designed and targeted social enterprise can solve many of the problems facing our world.



**DR BERTRAND PICCARD** January 2014  
Psychiatrist, Balloonist and Explorer  
Initiator and Chairman of Solar Impulse Project, Switzerland

Bertrand receives this award in recognition of his pioneering spirit to go beyond today's human and technical limits to fly around the world without fuel and without pollution. His remarkable commitments to save energy, to demonstrate the importance of clean technologies, to place dreams and emotions create great impact also to the young generation.

**JIM PUCKETT**  
Basel Action Network, USA

January 2013

Jim receives this award in recognition of his pioneering and breathless work to prevent the globalization of toxic wastes. The Steering Committee of IERC also honours his dedication to contribute comprehensive strategies for proper treatment of E-Waste across the globe.



**DR MIKE BIDDLE**  
Founder of MBA Polymers, Inc., USA

January 2012

Today, MBA recycles 1 million pounds of plastics waste a day! Mike receives this award in recognition of his powerful spirit and lifetime work to develop a genius, very low energy consuming process to recycle plastics waste in order to drive industry and society towards a better, cleaner and fair world.



**MANFRED BECK**  
Recycling International, Netherlands

January 2011

Manfred receives this award in recognition of his lifetime work and editorial skills in promoting sustainability, inspiring entrepreneurs to invest in environmental technologies and businesses, in order to drive industry and society towards a better and cleaner world.



**KARL-HEINZ FLORENZ**  
the Father of the WEEE Directive, European Parliament

January 2010

Karl-Heinz receives this award in recognition of his outstanding commitment, leadership and fighting for a sustainable world, which resulted in the creation of the most important regulation regarding Electronics Waste Recycling on the European continent.



**DR MARCO BULETTI**  
Federal Office for the Environment, Switzerland

January 2009

Marco receives this award in recognition of his outstanding commitment and leadership which resulted in the creation of the Mobile Phone Partnership Initiative (MPPI).



**PROF. DR IR. AB STEVELS**  
Philips Consumer Electronics, Netherlands

January 2008

Ab receives this award in recognition of his outstanding commitment to preserving our environment by developing and promoting efficient recycling technologies.



**PROF. THEO LEHNER**  
Boliden Mineral AB, Sweden

January 2007

Theo receives this award in recognition of his outstanding commitment to preserve our environment by developing and promoting efficient recycling technologies.





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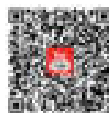
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## ANDRITZ MeWa at IERC

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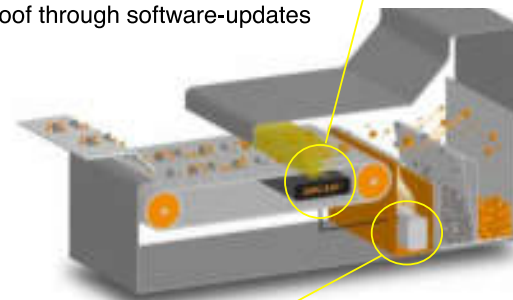
Our recycling solutions for WEEE, refrigerators, cable scrap, oil filters, tires, bio-waste and the production of RDF on YouTube.

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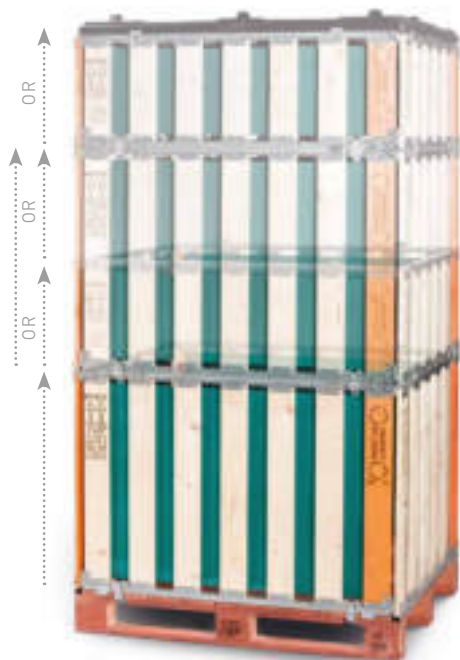
FPD



CRT



ADR



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## Upcoming ICM Events:

www.icm.ch

### Electronics & Cars Recycling WRF 2017

WRF  
2017



November 14 – 17, 2017  
Macau, China  
organized by World Recycling Forum



### 17<sup>th</sup> International Electronics Recycling Congress IERC 2018

IERC  
2018



January 17 – 19, 2018  
Salzburg, Austria



### 18<sup>th</sup> International Automobile Recycling Congress IARC 2018

IARC  
2018



March 14 – 16, 2018  
Vienna, Austria



### 23<sup>rd</sup> International Congress for Battery Recycling ICBR 2018

ICBR  
2018



September 26 – 28, 2018  
Berlin, Germany



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specializes in electronic waste management. We are based in Serbia and have strong regional contacts, but our aspirations are global.

Through years of experience, we have developed efficient and environmentally sound ways of recycling WEEE, PET and sorting communal waste, and think we have valuable experiences to share. The controller shown here is one of them.



The fact is, the recycling industry is not the most transparent in the world. We are not so good at sharing what we know. If one technique is developed in, say, Indonesia, chances are that it won't be implemented in Bulgaria for another ten years.

assumed that transferring knowledge is too complicated and costly.

But what is really costing us is not sharing our knowledge. Not sharing best practices or the challenges we are facing and not engaging in networking and open communication with each other. If other industries behaved like ours, we'd still be using rotary phones and driving Ford T.

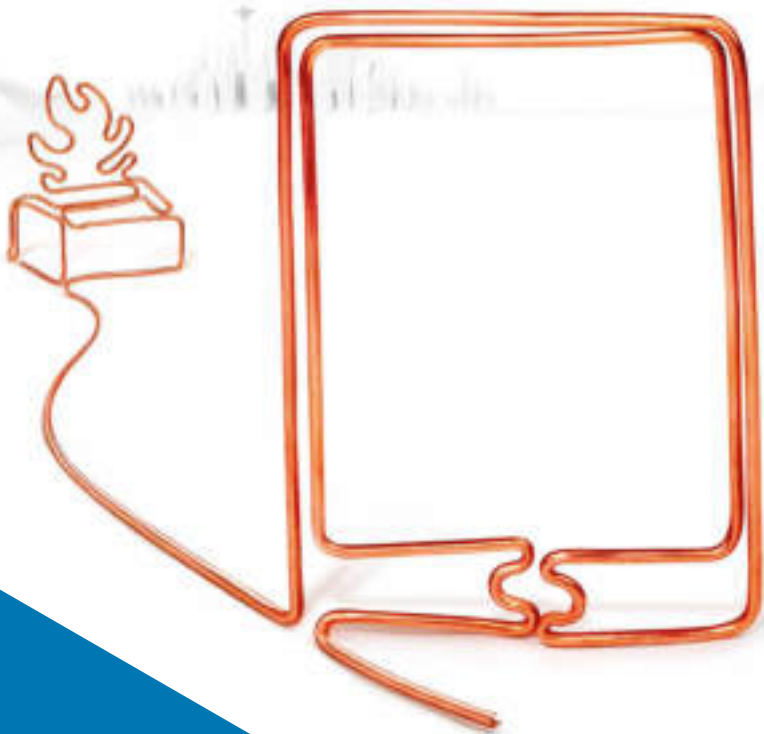
There are many reasons for this. The main one is that jurisdictional laws governing the recycling industry vary from country to country. Also, because waste treatment technologies are big and cumbersome, it's

We are E-Reciklaza, a recycling company that

We'd love to hear from you. Perhaps it will lead to a successful partnership, joint venture or consulting engagement. I am Ninoslav Milenković, CEO, and would be interested to personally speak with you. You can reach me on +381 63 1085231 (including Wapp) or at [ninoslav@ereciklaza.com](mailto:ninoslav@ereciklaza.com).



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