



Horizon 2020

THE EU FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION (2014-2020)

# Partner Search - Societal Challenge 5 "Climate Action, Environment, Resource Efficiency and Raw Materials"



## PART A: DETAILS ABOUT YOUR ORGANISATION

Organisation	Vienna University Of Technology, Institute For Water Quality, Resource, and Waste Management	Country	Austria
Contact person	Prof. Helmut Rechberger	Website	iwr.tuwien.ac.at
Address	Karlsplatz 13/226.2	Email	office@iwr.tuwien.ac.at
Postcode	1040	Tel	+43 1 58801 22641
City	Wien	Fax	+43 1 58801 22697
N° of employees	29 (Research group), 4,500 (University)	N° of researchers	22 (Research group), 3,400 (University)

Organisation  
expertise  
(~800 words)

Expertise/Competences/Technologies:  
**Growth in materials consumption causes increasing amounts of wastes and consumer emissions. It is our goal to supply tools for a better understanding and design of the metabolism of urban societies. Our solutions support a gradual shift from a quantitative material growth to a qualitative increase in welfare with less pollution and better resource use.**  
**Our main expertise and competences are:**  
- conceptual design and evaluation of waste management systems  
- description, analysis, and assessment of waste management processes (incineration, C&D waste recycling facilities, landfills, mechanical-biological treatment plants)  
- laboratory analysis of wastes, waste derived products, and secondary raw materials (RDFs, incineration residues, C&D waste products)  
- resource use and recovery potentials calculated by material flow analysis (MFA)  
**Technologies we are equipped with / we have developed:**  
- State of the art ICT infrastructure  
- Computer programs developed at our institute (STAN and BIOMA - see section Research and Innovation)  
- Laboratory equipment (heavy duty cutting mill, vibrating cup mill, special equipment for milling of plastics, sieve shaker, microwave digester, CNS analyzer, ICP spectrometry, N analyzer, XRF analyzer, etc.)  
Research and Innovation:  
**We have carried out numerous contract research projects for private and public entities, as well as basic research in the field of resource and waste management. Thereby, we have developed computer programs for the calculation of general mass flows (STAN - free download under <http://www.stan2web.net/>), and carbon flows in waste incineration plants (BIOMA - free download under <http://iwr.tuwien.ac.at/ressourcen/downloads/bioma.html>). The latter has also been registered as European patent.**  
**Some of our current and latest research projects:**  
- CD Laboratory for Anthropogenic Resources: investigating plastic and aluminum flows in Austria; environmental impact of the utilization of RDF in steel production; management and recycling of materials from waste incineration fly ashes; determination of secondary raw materials in buildings and infrastructure; developing an evaluation tool for secondary raw materials  
- EnBA: developing a concept for the sustainable use of construction waste (EU Life+)  
- SUSAN: phosphorus recovery from sewage sludge incineration ashes (EU)  
- CHARO: characterization of bottom ash from MSW incinerators  
- SKUDENA: assessment of the after care and long-term stability of landfills  
- IRMAR: integrated resource management and recovery (cooperation with DTU)  
- ROHkrit: material flow of critical raw materials in Austrian high-tech industries

<b>Type of organisation</b> <input type="checkbox"/> Private Company – large <input type="checkbox"/> Private Company – SME* <input checked="" type="checkbox"/> University <input type="checkbox"/> Research Centre <input type="checkbox"/> CSO <b>Other (specify):</b>	<b>SC5 - CLIMATE ACTION, ENVIRONMENT, RESOURCE EFFICIENCY AND RAW MATERIALS:</b> <input type="checkbox"/> 5.1. Fighting and adapting to climate change <input checked="" type="checkbox"/> 5.2. Protecting the environment, sustainably managing natural resources, water, biodiversity and ecosystems <input checked="" type="checkbox"/> 5.3. Ensuring the sustainable supply of non-energy and non-agricultural raw materials <input type="checkbox"/> 5.4. Enabling the transition towards a green economy and society through eco-innovation <input type="checkbox"/> 5.5. Developing comprehensive and sustained global environmental observation and information systems <input type="checkbox"/> 5.6. Cultural heritage
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	<input checked="" type="checkbox"/> Horizontal and cross-thematic activities <input type="checkbox"/> Other (please specify):
<b>Participation in successful projects within the EU-Framework Programmes:</b>	
<u>Acronym and title:</u> AWAST - Aid in the management and european comparison of a municipal solid waste treatment for a global and sustainable approach <u>Type of project and programme:</u> FP5-EESD <u>Website:</u> <a href="http://awast.brgm.fr/">http://awast.brgm.fr/</a>	<u>Acronym and title:</u> HOLIWAST - Holistic assessment of waste management technologies <u>Type of project and programme:</u> Specific Targeted Research Project - FP6-POLICIES-1.6 <u>Website:</u> <a href="http://holiwast.brgm.fr/">http://holiwast.brgm.fr/</a>
<u>Acronym and title:</u> FORWAST - Overall mapping of physical flows and stocks of resources to forecast waste quantities in Europe and identify life-cycle environmental stakes of waste prevention and recycling <u>Type of project and programme:</u> Specific Targeted Research Project - FP6-POLICIES-3.4 <u>Website:</u> <a href="http://www.forwast.brgm.fr/">http://www.forwast.brgm.fr/</a>	<u>Acronym and title:</u> SUSAN - Sustainable and Safe Re-use of Municipal Sewage Sludge for Nutrient Recovery <u>Type of project and programme:</u> Specific Targeted Research Project - FP6-SUSTDEV-2004-3.II.3.2.4 <u>Website:</u> <a href="http://www.susan.bam.de/">http://www.susan.bam.de/</a>

## PART B: DETAILS ABOUT OUR PROJECT IDEA

<b>Acronym and title</b>	No title, as we are offering our participation in a project.			
<b>Project type</b>	<input checked="" type="checkbox"/> Reaserch and Innovation Action	<input type="checkbox"/> Innovation Action	<input type="checkbox"/> SME Instrument	
	<input checked="" type="checkbox"/> Coordination and support actions	<input type="checkbox"/> ERA-NET	<input type="checkbox"/> Other:	
<b>Call Identifier</b>	<b>2014:</b> <input checked="" type="checkbox"/> H2020-WASTE-2014-one-stage			
<b>Exact topic / task</b>	<b>WASTE-3-2014-Recycling of raw materials from products and buildings</b> <b>WASTE-4c-2014-Secondary raw materials inventory</b>			
<b>Scientific keywords</b>	Urban mining	MFA	Resource Management	Waste Management
<b>Our role in the project</b>	<input type="checkbox"/> Coordinator <input checked="" type="checkbox"/> Partner <input type="checkbox"/> Work Package Leader <input type="checkbox"/> Subcontractor			
<b>Our contribution to the project</b>	<b>Research in research and innovation actions</b> <b>Scientific back-stop and consultancy in coordination and support actions</b>			
<b>Partners already involved</b>	<b>BRGM (Bureau de recherches géologiques et minières), Orleans, France</b> <b>(<a href="http://www.brgm.eu">www.brgm.eu</a>)</b>  <b>IWAR, Chair of Material Flow Management and Resource Economy, TECHNISCHE UNIVERSITÄT DARMSTADT, Germany</b> <b>(<a href="http://www.iwar.tu-darmstadt.de/sur/">http://www.iwar.tu-darmstadt.de/sur/</a>)</b>  <b>Leeds University, Faculty of Engineering, United Kingdom</b> <b>(<a href="http://www.engineering.leeds.ac.uk/people/civil/staff/c.velis">http://www.engineering.leeds.ac.uk/people/civil/staff/c.velis</a>)</b>			