



Green
Building
Council
Italia

EUROPE REGIONAL
NETWORK



WORLD
GREEN
BUILDING
COUNCIL



LEVEL(S)

|
Un linguaggio
europeo comune
per la sostenibilità
in edilizia

Roma
27 nov 2017

Resource Efficiency as a Key for Market

Nunzio Di Somma

RINA SERVICES' experience



classification, certification, inspection & testing

RINA GROUP: ABOUT US



RINA

With a history going back 150 years, RINA is a multi-national Group which delivers verification, certification, conformity assessment, marine classification, environmental enhancement, product testing, site supervision & vendor inspection, training and engineering consultancy across a wide range of industries and services.



RINA SERVICES

RINA SERVICES S.p.A. is the RINA company that delivers services of classification, certification, testing and inspection (TIC Services) to guarantee excellence to organisations in the marine, environment and energy, infrastructures, transport and logistics, quality and safety and agri-food sectors.



|

Resource Efficiency

The **construction sector** is the largest consumer of raw materials in the EU; **construction and demolition** activities also account for about 33% of waste generated annually (EEA 2010).

A large proportion of different waste streams has the potential to be reused or recycled within the construction sector thus contributing to **save natural resources and energy** through a **circular process**.

The EU **Roadmap to a resource efficient Europe** outlines the structural and technological changes needed by 2050 in order to support the shift towards sustainable growth via a resource-efficient, low-carbon economy, including reuse of secondary materials.

Barriers to the Market uptake of innovative construction products

However the **European standards** such as the Construction Products Regulation n. 305/2011 (CPR) and the Waste Framework Directive aim to eliminate technical-commercial barriers within the member States of the European Union, there are still **non-technological barriers** (for example economical barriers, the regulatory framework, the social perception, or the structure at company/society level) which somehow impede or at least slow down the movement and reuse of construction products (including C&DW) within the EU.

In order to identify these barriers and to offer a contribution through the market uptake of recycled materials and products RINA SERVICES is currently working on two EU projects:

- **HISER** (Holistic Innovative Solutions for an Efficient Recycling and Recovery of Valuable Raw Materials from Complex Construction and Demolition Waste) - <http://www.hiserproject.eu/>
- **FISSAC** (Fostering Industrial Symbiosis for a Sustainable resource intensive industry Across the extended Construction value chain) -
- <https://fissacproject.eu/it/>

HISER Project

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 642085



The **main objective of HISER** is to develop and demonstrate novel **cost-effective holistic solutions** (technological and non-technological) to increase the recovery rates from increasingly complex Construction and Demolition Wastes (**C&DW**), according to the principles of circular economy approach throughout the whole value chain in the construction sector.

The following **solutions are proposed** within the project:

- harmonized procedures, supplemented by an intelligent tool and systems for **traceability of the supply chain**, for **highly-efficient sorting at source** in demolition and refurbishment works;
- advanced sorting and recycling technologies with **automated quality control** for the production of high purity raw materials from complex C&DW;
- development of optimized construction products (such as low embodied energy cements, green concretes, bricks, gypsum plasters and gypsum plasterboards or extruded composites) with **higher rates of recycled materials**.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 642154



The **overall objective of FISSAC** project is to develop and demonstrate a new paradigm built on an innovative **industrial symbiosis model** towards a **zero waste approach** in the resource intensive industries of the construction value chain.

The aim of the project is:

- To **design and evaluate new production processes and products** based on technical, economic and environmental criteria that are going to be applied in FISSAC scenario;
- To validate technologies through the performance of an **Environmental Technology Verification** (ETV) Protocol;
- To contribute to standardisation of the new products;
- To develop a **geo-referenced software platform** including data on waste availability, physical and chemical characteristics and other relevant data to be shared, which **enable the exchange of resources**, facilitate **contacts among industrial players** of the construction value chain and encourage research and development for underdeveloped waste streams.

Favourable system conditions need to be implemented in order to eliminate barriers and to allow widespread reuse of materials and higher resource productivity.

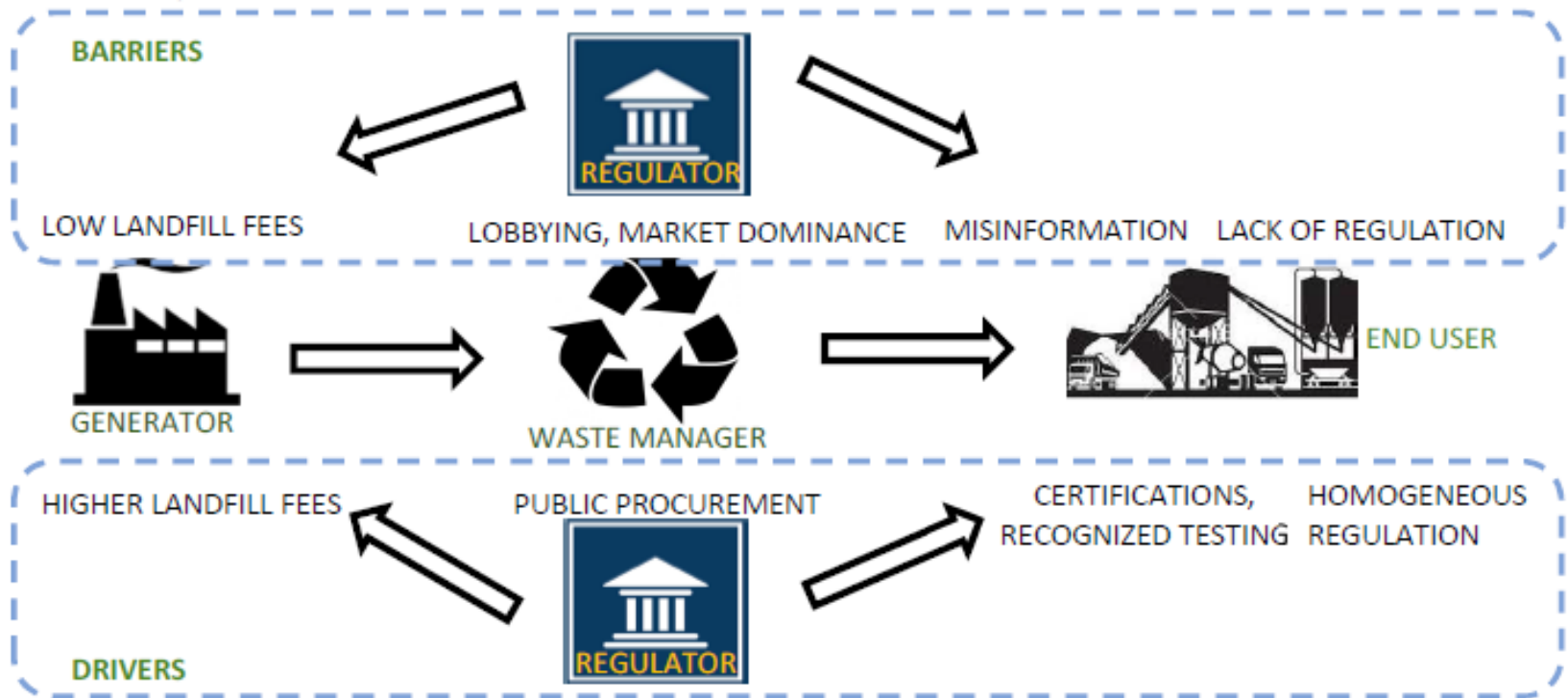
The shift towards a circular economy requires **new business models** able to replace existing ones or seize **new opportunities**.

Brand and volume leaders with significant market share and capabilities could play a **major role** in driving circular economy into the mainstream and letting these models be copied and expanded geographically.

Institutions and popular opinion also have a **key role** in this process, for example by:

- Rethinking incentives
- Access to financing
- Providing a suitable set of international environmental rules
- Leading by example and case studies

Drivers to the Market uptake of innovative construction products





Green
Building
Council
Italia

EUROPE REGIONAL
NETWORK



WORLD
GREEN
BUILDING
COUNCIL



**Grazie
dell'attenzione!**