ERFMI.

Invitation to tender – May 2020

Research identification and sorting technologies that can identify flooring containing legacy additives and sort it from flooring that does not contain legacy additives.

About ERFMI

The European Resilient Flooring Manufacturers' Institute is the European trade association for resilient flooring, representing the interests of 17 flooring manufacturers and distributors in Europe, who between them place around 370 million square meters of resilient floor coverings on the market in Europe each year.

Our members offer a wide variety of durable, flexible and impermeable flooring products made of both synthetic and natural material.
In 2019, ERFMI developed a new road map with a strong focus on developing a circular economy for our sector. ERFMI has a Circular Economy Platform which operates as part of the technical committee. We also have a Circular Economy Platform focusing particularly on Vinyl Flooring as 92% of the products placed on the market by ERFMI members are PVC. This platform is called Revinylfloor

The project

Revinylfloor, the circular economy platform for PVC flooring is managed under the umbrella of ERFMI. Revinylfloor has received co-funding from VinylPlus, the PVC industry voluntary commitment to sustainable development, to help develop a more circular economy for PVC flooring.

PVC flooring is a durable product and can have a life span from 5 to 30+ years. One of the key challenges for recycling post-consumer flooring is the presence of legacy plasticisers in the flooring, i.e. additives that were used when the flooring was first manufactured but are no longer allowed in new products due to REACH legislation. At the moment the assumption is made that all post-consumer PVC flooring contains legacy additives, although this is clearly not the case as flooring is uplifted and replaced for a number of different reasons at different times (e.g. due to changing design trends etc.)and the legacy plasticisers in question have been phased out for up to 10 years. ERFMI believes that it would be possible to vastly increase the volumes of post-consumer waste that is recycled almost immediately, if the waste could be sorted according to whether it contains legacy additives or not. The main additives we are referring to are low molecular weight phthalates, such as Bis(2-ethylhexyl) phthalate (DEHP) and Benzyl butyl phthalate (BBP)
To this end ERFMI is seeking to commission work to research identification and sorting technologies that can quickly detect flooring with and without legacy additives.

Scope

We expect the selected contractor to carry out a thorough literature and patent search as well as to contact technology providers and developers. The research should cover:

- Identification and sorting technologies that are commonly used in the waste sector
- Identification and sorting technologies that have been developed but are not currently used
- Identification and sorting technologies that are under development; and
- Identification and sorting technologies that are used in other sectors, but could be applied to the flooring waste sector

The focus should be on instant identification technologies. The contractor should contact the technology providers and ask them whether they believe their technology is likely to be able to detect the additives. The contractor should present a summary of findings to the ERFMI project group and propose a number of trials with the most promising technologies. The technology trials will not be part of this tender but should be costed separately as part of a follow-on project.

Tasks

The selected contractor will be required to:

- Research and list identification and sorting technologies both existing and emerging which could be applied to instantly identifying flooring with and without legacy plasticisers. This should be based on a thorough literature and patent search as well as via discussions with technology providers and companies developing new technologies.
- Put together a matrix listing all the technologies and identifying the advantages and disadvantages of each technology and its likelihood for success with identifying legacy plasticisers.
- Contact companies providing the most promising technologies and put together costings for trials with the technology providers

Deliverables

- A kick-off meeting with the project team (possibly via web conferencing)
- Fortnightly progress updates by email or phone with the ERFMI project manager
- A mid-term conference call with the project team
- A presentation to the Revinylfloor members on findings – to take place in Brussels.
- A final report to include a matrix listing all the technologies found including references and contact details

Expertise required

ERFMI is looking for a consultant with a background in or good understanding of identification and sorting technologies. The proposal should be well structured and explain what approach will be taken to deliver the project.

Timeframe

Work Programme

Work to commence by:	1st September 2020
Work to be completed by	15th December 2020

Tender Timetable

Deadline for receipt of submissions	15th June 2020
Receipt of written notification of ERFMI's decision	30th July 2020