




THE MOST VALUABLE MATCH

Excess
Materials
Exchange



Excess Materials Exchange (EME) is a young and innovative technology company. Our digital matching platform finds new high-value reuse options for the materials and (waste) products of your business. We are matchmakers. In addition, we provide you with valuable data about the potential positive impact on your environmental and financial performance. This helps you make a substantial contribution in your transition towards the circular economy. There is a world to win. It has been our experience that our process increases the financial value by an average of 110% and reduces the ecological footprint by an average of 60%. It's all about the most valuable match!

Boosting the circular economy

We are determined to radically disrupt the way we deal with resources, materials and waste streams. Far too many valuable resources and materials are wasted or ill-designed in the current paradigm, for which the planet pays a heavy price. Think of CO₂ emissions, soil pollution and the plastic soup in our oceans. We want to change that. By introducing an innovative way of doing business that should become the new industry standard. By challenging companies to design and produce their goods in a more efficient and circular manner. And by making lots of valuable matches. This way, we accelerate the global transition to a circular economy – and play our part in creating a more liveable planet.

Technology driven transformation

In order to realise the fundamental systemic change we envision, we advise businesses to take a different approach; one that combines social, organisational and cultural aspects. In our work we apply an integral approach. This entails creating new ways of cooperation and organisation, helping in shaping different views on what is considered worthless and valuable, and implementing innovative new business concepts. Technological innovation is also a key element in this systemic change. In our view, using Blockchain, Artificial Intelligence and the smart use of data, is indispensable in realising the transition towards a circular economy.

Our services

Data registration with Resources Passports

Subscribe for only 99 euro per month. Thanks to our Resources Passports, you can register all your materials and products and make better data driven decisions about what to do with your assets.

EME Quick Scan

Receive thorough advice, within 5 business days, about the financial and environmental potential of your material, product or wastestream.

4D Matchmaking

We match your materials and products to high-value reuse options, and link you to one of our innovation partners to realise your circular ambitions.

Internal Circular Marketplace

Insight into which raw materials, materials or products you actually have 'in-house'. Possibility to trade those items on a secured digital platform.

You can compare it with the way companies like Netflix, Airbnb and Uber disrupted their markets using innovative technologies. We aspire a similar transformation regarding the way we deal with materials, products and waste streams. So how does that work?

Resources Passport to show value

The first step in our process is to create a Resources Passport. This passport has a standardized format. It provides an overview of the components, deconstructability and toxicity of the material or product, among other things. The passport provides this material or product with an 'identity'. This is important because anonymity renders materials worthless. There are many advantages to giving material or waste streams an identity. This enables you to exactly know, with a click of a button, which assets you have, where they are located, what quality they are in, and when they are released on the market again.

Furthermore, the identity helps you to determine the potential value that can be derived from the material, product or waste stream at end-of-life. In short, we answer the question: can higher-value solutions be found? If so, how much money can be made with that? And finally, but crucially, how much environmental impact can be saved with those higher-value solutions?

Most valuable match

With our platform, we help you unlock the potential of your material, product and/or waste stream. We find high-value matches. With our knowledge and technology, we can find unique and innovative solutions. The Resources Passport enables us to search for matches across different sectors. Waste in one sector often remains waste within that sector. However, that specific material can be a sought-after material for products in another sector. Or even an important building block for reuse. We can also help you implement the match, together with the innovation partners within our extensive network. But there's so much more than just a valuable match.



High-value is key

Everything that we do at EME boils down to one key concept: high-value. We have a unique approach to classify solutions for your material or waste-product as high-value. To do that, we consider 3 elements: ecological-, financial- and social value.

Companies generally refer to the 'waste hierarchy' when it comes to expressing the circularity of their material and product chains. This hierarchy is often referred to as the waste ladder. For instance, burning materials with energy recovery scores low on the ladder because value is lost. Recycling is of higher-value way than incineration. Reusing a product is an even higher-value solution, so it's higher up the ladder. Yet in our view, high-value equates to more than just the ecological footprint. It's also about the financial results: it is important that the business case is sound.

And let's not forget the social aspect. Recycling and reusing materials or waste products can create new meaningful jobs. However, a circular solution can't be called 'high-value' if people are exploited somewhere in the value chain.

A practical example: railway tracks

For the used railway tracks of ProRail, the organisation that takes care of maintenance and extensions of the Dutch railway network infrastructure, EME sought high-value new reuse options. On average these tracks have a lifetime of around 40 years. This means ProRail annually replaces between 200 and 300 kilometer of railway tracks.

In the current end-of-life scenario, around 90% of all used tracks are exported to Asia or Turkey for a scrap price of less than 8 euro per meter. Over there, the tracks are mostly recycled through a melting process, occasionally they are reused.

In rare instances, the tracks are reused in The Netherlands at industrial sites with lower functional requirements.

Thanks to the Resources Passport, our knowledge and the smart technologies of our digital platform, we were able to find new high-value reuse options for the railway tracks. We discovered that they can be used as construction beams in buildings. A valuable match. Financially, because an average steel construction beam is worth 20 to 50 euro per meter. And of course environmentally, because it's not necessary anymore to ship the track to far destinations and melt them over there. Talk about value!

The impact of matchmaking

Before we officially started EME, we tested the potential of our business model. Together with 10 organisations, among which ProRail, Rijkswaterstaat, Royal Schiphol Group, Philips, Heembouw and Tarkett, we took the first steps in exploring the possibilities of EME in an extensive pilot. For 18 materials we sought and found the most valuable, high-value reuse options. The potential impact of these matches is impressive.



CO2 emission reduction of 123 kilotonnes

(which equals the emissions of 23.000 car rides around the world)



Energy saving of nearly 2,900 TeraJoule

(enough energy to keep the city lights of Paris burning for at least 5 years)



Water savings of more than 2 million m3

(enough water to fill 860 Olympic-size swimming pools)



Financial value creation of 64 million euro per year

"We have to find ways of giving what we unhelpfully refer to as 'waste' a proper value – we have to monetize it. (...) I was intrigued to hear about the innovative approach being developed in the Netherlands by a company called Excess Materials Exchange. They have developed a digital marketplace where companies can exchange materials and products, and which seeks to identify the highest-value uses. This looks promising as an example of a new approach that might help unlock the full potential of the circular economy."

*Prince Charles – HRH the Prince of Wales
At Business in the Community's 'Waste-to-Wealth Summit'*



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