



re-generate

RE-GENERATE YOUR BUSINESS CASE FOR MORE SUSTAINABLE HVAC&R SOLUTIONS

Evaluate the total business & technology potential of Additive Manufacturing for your business

Invest in new R&D projects, technologies, products and value chains to seize the full potential of AM

Improve your strategic positioning with more effective prototyping and rapid product development

www.re-generate.co

A global industry challenge

Today, the HVAC&R industry is challenged by two meta trends driving change: Firstly, the role HVAC&R systems play to increase safety and comfort levels for a growing mankind aspiring to better living conditions. Secondly, and connected to its rapid growth, its strong environmental footprint via energy consumption, emissions and resources used. As a result, the industry needs to strive for higher resource efficiency in production, distribution and operation.

Why Additive Manufacturing?

Additive Manufacturing (AM), commonly known as “3D Printing”, describes any production technology in which the final piece is built layer by layer in an additive process - different from traditional subtractive methods or moulding / casting.

The term covers a variety of technologies to sinter, melt, fuse, solidify, jet or deposit liquids, powders or solid material into a final object. AM processes use a multitude of materials, such as metals, ceramics, sand, polymers, conductive or nano materials. Materials frequently used in industrial processes like stainless steel, aluminium, copper, titanium, iron or silicone are suitable for AM.

Additive Manufacturing for prototyping and production has the following benefits:

New supply chains & on-demand production: Local production with less or no dependency on specialised suppliers is possible. Direct 3D data exchange becomes available for an immediate “CAD-to-part” printing, reducing supply chain restrictions.

Faster innovation and manufacturing cycles: AM moves R&D and production back to the innovation hot spots. AM use results in significantly reduced development cost and time, at increased productivity with reduced human error.

Design freedom: The design of complex and irregular geometries is possible and one of AM’s largest advantage, at high accuracy levels and innovative design concepts.

Product & material improvements: Using lighter, stronger designs with increased part functionality and materials can lead to higher efficiency products. 90% of materials used in AM processes are those also used in traditional production. AM allows for combining materials for better conductivity, fluid compatibility, or including multi-functional properties.

Environmental benefits: AM uses less or lighter materials, allows for low to zero waste production, and requires less logistics.



Our services for the HVAC&R industry

Combining 10+ years of work for the HVAC&R industry to find better technology options, with a strong business and research network for Additive Manufacturing, re-generate can offer expert knowledge for your individual needs:



Market research on sectors, technologies, legal frameworks, standards, value chains and success factors for AM



Consulting on financing options and funding schemes for AM; matchmaking AM and HVAC&R supply chains; business analysis and strategy development



Coaching on AM and its total business, technology & innovation value; workshops for executive level, management and R&D staff



Feasibility studies on AM's potential for industries, sectors, applications, product groups, systems, components and/or prototypes



R&D support for research on materials, design & functional integration, production methods, rapid product development and prototyping

re-generate supports you to evaluate and optimize the market, technology, process, design, material, cost and environmental potential of Additive Manufacturing for your business.

Our research network

re-generate can build on a strong network of leading research facilities, universities, technology providers and experts to address any challenge for material science, construction, applied mechanics, particle technology, thermodynamics, systems integration, and industrial engineering. We partner with award-winning sustainability product designers.

About re-generate

re-generate is an independent business consultancy for the HVAC&R industry. Our mission is to support our partners with tailored strategy consulting and business development, research on markets and technologies, and communications; to seize more opportunities at lower environmental costs.

re-generate focuses on advanced manufacturing, with special attention to the potential of “3D printing” for industrial applications.

image source: Autodesk Within

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