

A FUTURE FOR PLASTICS WASTE: RECYCLING TECHNOLOGIES

THE CHALLENGE

Consumers, governments, NGOs, manufacturers and brands are all making firm commitments to transform their plastics supply chains to achieve greater circularity and work towards 'net zero'.

These include:

- Reducing plastic content & waste;
- Recycling and recovering more plastic waste; and
- Replacing plastic content with alternative materials (incl. biobased plastics) and recycled plastics.

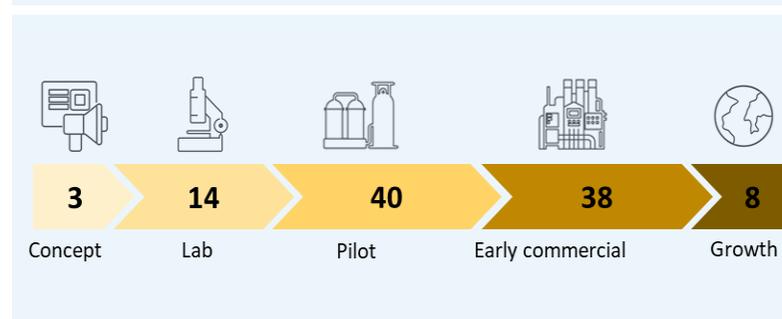
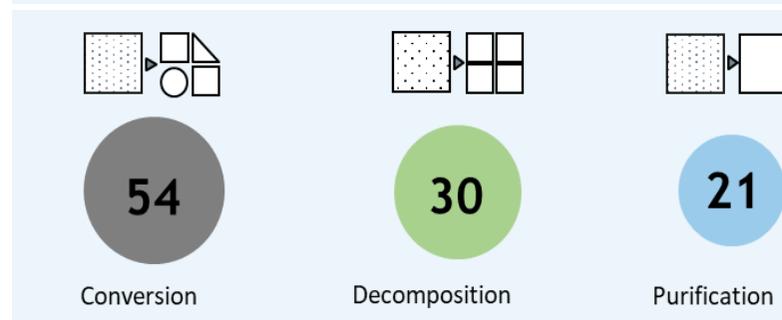
In 2019, the Ellen MacArthur Foundation estimated that over 5.4 million tonnes of recycled plastics are needed in the global packaging sector alone by 2025 to reach these targets. Other key plastics sectors like construction, automotive and electronics also have ambitious goals to recycle plastic waste and use recycled content.

Transformation of supply chains and new forms of supply chain collaboration is needed to achieve these global commitments with the help of innovative supply chain approaches and advanced recycling technologies.

HOW WE CAN HELP

Anthesis supports clients on a wide range of plastics sustainability requirements to meet their company and industry commitments and ensure regulatory compliance.

Our support can flex between a 'high-level' review of your sourcing strategy and options through to selecting and implementing contracts with existing plastics recyclers and identifying worldwide investment opportunities for new recycling technologies and plants.



Technology origin

The Anthesis Plastics Recycling Technology Hub

Anthesis is in the unique position of being able to support the creation of circular supply chains using the Anthesis global Plastics Recycling Technology Hub, which captures detailed information and analysis on over 100 plastics recycling technologies and their reference plants.

With this tool, Anthesis supports clients across the plastics value chain to identify which plastics can be recycled to date and which plastics could be recycled in the near to medium-term future.

The tool provides sourcing options to replace virgin plastics with recyclates and to identify fossil fuel replacements such as naphtha and methanol. It also helps us to identify credible suppliers and compare different technologies and their environmental impacts to mass balance circularity and build new circular supply chains.

Technology type

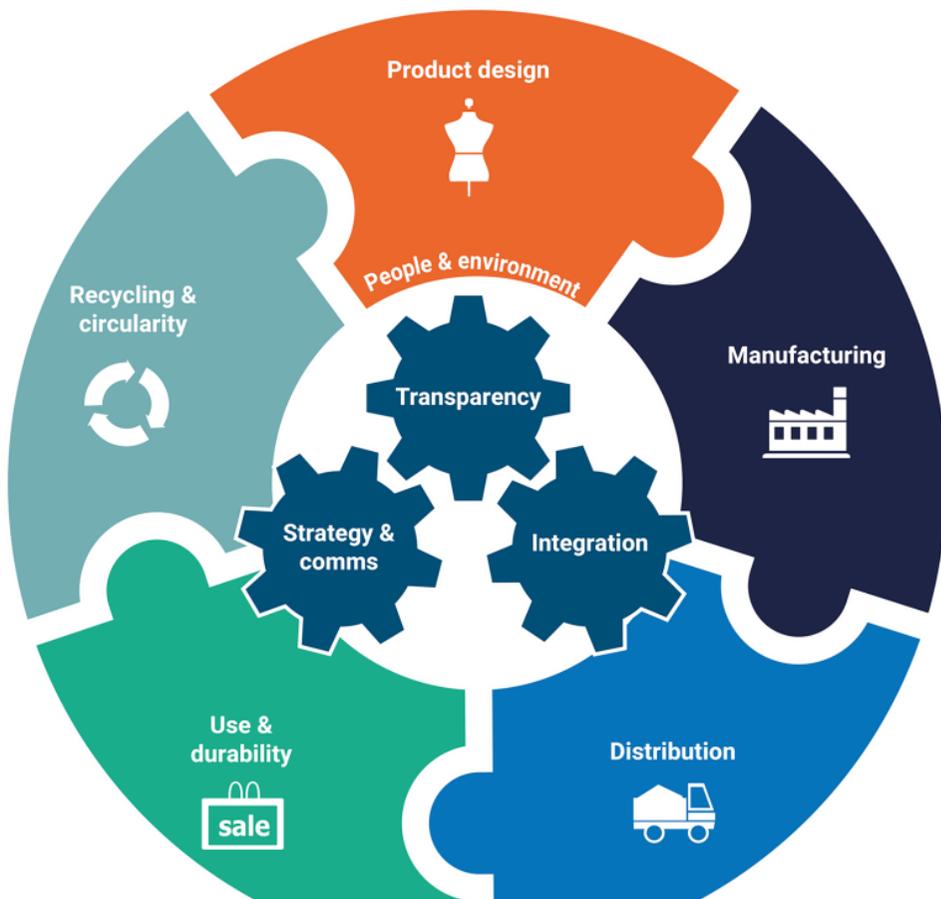
Technology maturity

OUR SUPPORTING SERVICES ACROSS THE PLASTICS VALUE CHAIN

Anthesis has a global team of sustainability experts and waste specialists, and we are in the unique position of being able to support companies across the supply chain.

Our waste and sustainable product team are trusted advisors to some of the most well-known brands, retailers, investors and polymer producers as well as governments and industry associations.

Expertise, experience and passion along the whole value chain, supported by superior knowledge from our Plastics Recycling Technology Hub, allows us to put our clients on a strategic pathway to sustainability and success.



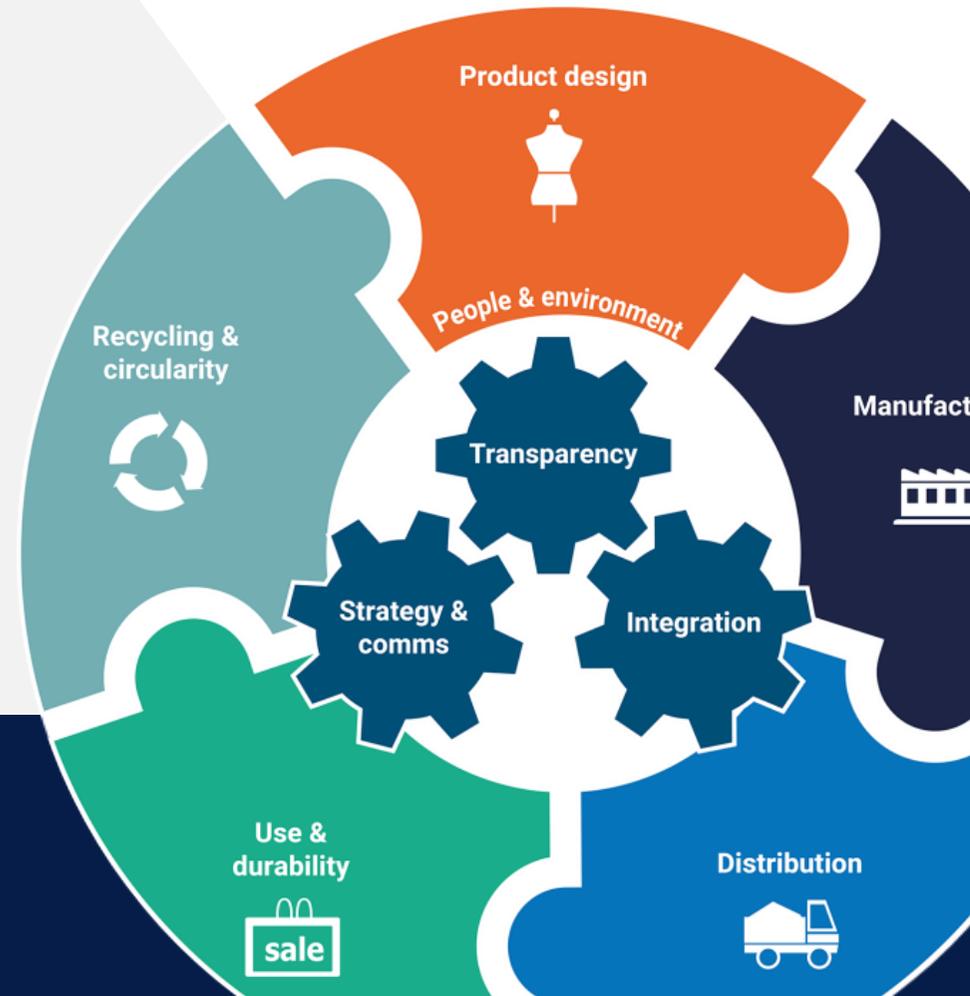
Supply chain stage	Anthesis service offering
Product design	<ul style="list-style-type: none"> Competitive benchmarking Product impact assessment (including Life Cycle Analysis) Carbon and water foot-printing Science-based target analysis, development and implementation Supporting packaging materials design and specification
Manufacturing	<ul style="list-style-type: none"> Sustainable materials/product strategy and implementation Product compliance program development and implementation (Incl. Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)) Circular waste management strategies and implementation Sourcing of recycled plastics feedstock, contracting and investment
Distribution, use and durability	<ul style="list-style-type: none"> Responsible sourcing program development/support Packaging inventory and analysis Plastics fate and leakage audits on a European and worldwide basis Sustainable packaging strategy and implementation Supplier engagement and education - supplier network platforms Supply chain mapping and value chain assessments, analytics and scorecards Compliance program development and implementation Chemicals management program development and implementation Resource efficiency improvement strategy and implementation
Recycling and circularity	<ul style="list-style-type: none"> Circularity and end of life solutions (product and business models) Use/disposal analysis and improvement recommendations Identification and due diligence of conventional and advanced plastics recycling and reprocessing technologies Business planning and recycling technology development Review of opportunities for carbon offsetting and technology accreditation
Additionally:	
Management systems	<ul style="list-style-type: none"> Sustainability strategy development/enhancement Social and environmental risk assessment - Environmental, Social, and Governance (ESG) support Leadership and governance implementation/enhancement Public sustainability disclosure and communications support Cost benefit analysis appraisals and project evaluations

SUPPORT FOR RECYCLING & CIRCULARITY

Anthesis Services	Anthesis can support you to:
Sourcing of secondary commodities (plastics recycle)	<ul style="list-style-type: none"> Identify suitable sourcing options, benchmark these against competitors, assess competing solutions considering costs, quality and volumes. Consider replacement strategies for plastics including evaluation of biopolymers, recyclates options and alternative materials. Provide advice on creating circular supply chains and business models - strategy, implementation and monitoring.
Landscape reviews and market assessments	<ul style="list-style-type: none"> Identify risk & opportunities for early movers, mitigate risks for new market entrants and carrying out horizon scans for existing market players along the plastics supply chain. Support technology developers commercialising their plastics recycling options, who will need to understand 'easy wins' in supportive markets.
Technology supplier appraisal and commercial due diligence (new projects, re-financing & acquisitions)	<ul style="list-style-type: none"> Accelerate plastics recycling and establishing new plastics recycling infrastructure: selecting technologies and suppliers, supporting business planning, undertaking commercial due diligence and ESG evaluation for new projects or company financing or acquisitions. Work for investors to screen the market for investment opportunities, support the client to financial close and evaluate the fit with their existing portfolio.
Feedstock appraisals and sourcing	<ul style="list-style-type: none"> Undertake market reviews to provide baseline assessments and forecasts of feedstock availability of varying specifications for reprocessing technologies. Appraisals can be undertaken at aggregated levels or for specific projects in support of securing investment funds.

Circular economy thinking can be challenging to implement and success depends on understanding the interdependencies and opportunities within the supply chain.

Anthesis are experienced in providing practical advice on creating circular supply chains. We can support your business to find credible, financially viable plastics recycling solutions and recyclates or chemical feedstock sourcing options that subsequently improve resource efficiency and reputation.

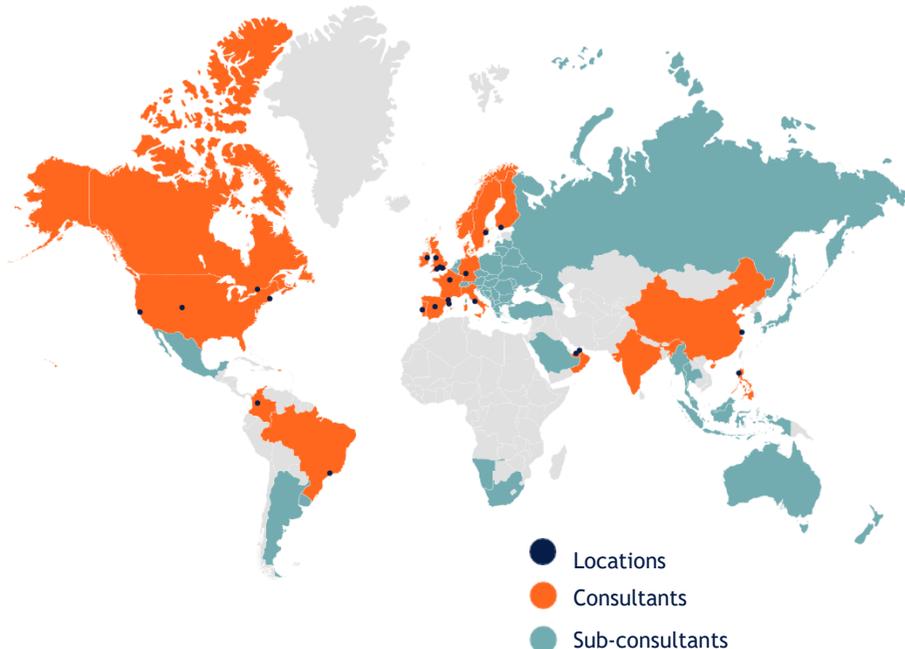


ABOUT ANTHESIS

Anthesis is the largest group of dedicated sustainability experts in the world: a team of 500+ people, working across seventeen countries, to serve more than 800 clients. We exist to shape a more productive and resilient world by helping organizations transition to new models of sustainable performance. Our team combines broad and deep sustainability expertise with the commercial and operational capabilities it takes to conceive and deliver real change.

The company combines the reach of big professional services groups with the deep expertise of boutiques. Anthesis has clients across industry sectors from corporate multinationals such as Gap, Guess, Nike, The North Face and Target, and also supports early stage companies through Anthesis Ventures.

Global presence



The Anthesis Activator Journey

Anthesis is the Sustainability Activator. The Activator Approach is our three-stage methodology for delivering sustainable performance. Whether corporate strategy or specific operational problem solving, the Activator Approach flexibly combines the right expertise and tools for the job, across a proven, end-to-end logic of change.



Phase 1
ANALYTICS



Phase 2
SOLUTION



Phase 3
IMPLEMENTATION

For further information, contact:

Claudia Amos
Technical Director, Europe
Claudia.amos@anthesisgroup.com

James Ewell
Associate Director, North America
james.ewell@anthesisgroup.com

