

WIPA Werkzeug- und Maschinenbau GmbH



Overview	
Country	Germany
Type of organization	SME
Number of employees	Over 100 employees as of 2025
Type of practice	Good
Level of investment	Big
Activity type	Processing waste
Key words	Recycling / Upcycling / Waste collection

www.wipa-germany.de

Summary

WIPA Werkzeug- und Maschinenbau GmbH, established in 1994 and headquartered in Stadtlohn, Germany, specializes in designing and manufacturing customized recycling machinery and systems for plastic processing. Their product range includes shredders, washing systems, friction washers, and drying units, catering to both clean production waste and contaminated post-consumer plastics. WIPA's commitment to innovation and sustainability has positioned them as a global partner in the recycling industry, providing efficient and durable solutions that give plastics a new lease on life.



Source: www.wipa-germany.de

Background and origin

Founded by Johannes Wissing, WIPA began with the development of the Plast Compactor series, addressing the need for efficient plastic processing solutions. Over the years, the company expanded its product line to include comprehensive recycling systems, emphasizing the importance of sustainable waste management. WIPA's growth reflects the increasing global demand for effective recycling technologies that support circular economy principles.

Relevance to the craft sector

WIPA's recycling systems produce high-quality recycled plastic materials suitable for various applications, including the craft sector. The processed plastics can be transformed into art pieces, decorative items, and functional products, promoting sustainable practices among artisans and crafters. By providing reliable machinery for plastic recycling, WIPA enables the craft community to access eco-friendly materials, fostering creativity while contributing to environmental conservation.

Target groups

- Plastic processing companies seeking efficient recycling solutions
- Artisans and crafters interested in sustainable materials
- Educational institutions promoting environmental awareness
- Community organizations focused on waste reduction



Source:
<https://www.facebook.com/photo.phpfbid=917134533445264&set=pb.100054461770567.-2207520000&type=3>

Material focus - type of waste material involved

- Post-consumer plastics, including common types like LDPE (low-density polyethylene), HDPE (high-density polyethylene), and PP (polypropylene).
- Contaminated plastics, which require extensive cleaning, separation, and drying—WIPA provides integrated washing lines to handle these materials effectively.
- Clean production waste from industrial processes, such as offcuts, scrap, and leftover plastic components.

Their machinery supports the entire recycling chain, from shredding and separating to washing and drying, making it suitable for both simple and highly contaminated plastic streams. The goal is to transform plastic waste into high-quality regranulate or material suitable for reuse in new production cycles.



Source:
<https://www.facebook.com/profile.php?id=100054461770567>

Stakeholders involved

- Clients (plastic processors, artisans, educational institutions, community organizations), who implement the systems in their operations.
- Internal professionals such as engineers, technicians, trainers, and support staff who design, build, and guide the use of the systems.
- At present, there is no mention of specific institutional partners, implementing agencies, or donors. The initiative appears to be privately funded through company revenue and investments.

Professionals involved and their roles

- Engineers design and optimize modular recycling systems.
- Technicians handle assembly, testing, and maintenance.
- Trainers provide client onboarding and technical instruction.
- Sales and project managers manage customer relations and tailor solutions to waste processing needs.

Connection of the practice with the project-identified needs

Knowledge of Waste Materials

WIPA supports Knowledge of Waste Materials by offering systems that help users understand different plastic types, including how to clean and process contaminated plastics efficiently.

Green Entrepreneurial Skills

It fosters Green Entrepreneurial Skills by providing scalable, energy-efficient recycling solutions that enable businesses to create sustainable models and comply with environmental regulations.

Creativity and Innovative Solutions

WIPA also encourages Creativity and Innovative Solutions by enabling the production of recycled plastics that can be used in creative applications like 3D printing, eco-friendly products, and design projects, making recycled materials more accessible to innovators and artisans.



Methodological approach to implement the practice

Process description - step by step instructions for implementing the practice

To implement WIPA's recycling system, the process begins with assessing the type and volume of plastic waste and the desired output quality.

Based on this, WIPA designs a customized recycling solution tailored to the client's needs. Once approved, the system is manufactured, assembled, and installed on-site. WIPA provides technical support and staff training to ensure proper operation and maintenance. Clients receive manuals and ongoing assistance.

The time needed for full implementation depends on the system size and complexity, typically ranging from a few weeks to several months. Most information and expertise come directly from WIPA's in-house engineering and technical teams.

Related Resources that have been developed

- Technical manuals and operation guides
- Training programs for machinery operation
- Customer support services for ongoing assistance



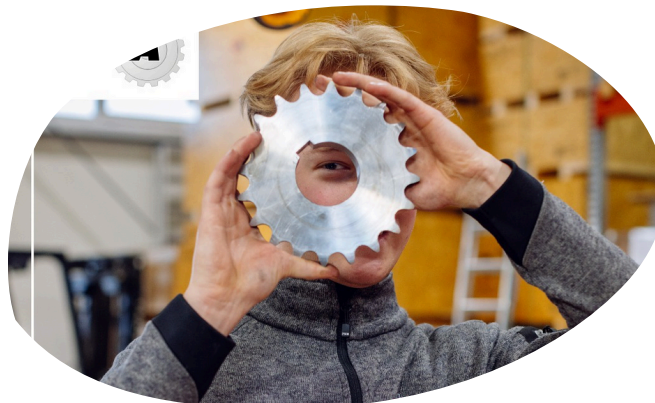
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End product

- Machinery for plastic recycling.
- Other end product of WIPA's process is high-quality recycled plastic material suitable for reuse in various industries. This material can be transformed into components for manufacturing, packaging, construction, and notably, the craft sector, where it serves as a sustainable base for creating decorative, functional, or artistic items.
- By making clean, consistent recycled plastic accessible, WIPA supports artisans, designers, and small producers in integrating circular materials into their creative work, promoting both environmental responsibility and material innovation in the crafts field.

Sources of funding for this intervention

Primarily privately funded through company revenues and investments.



Source: <https://www.facebook.com/photo.php?fbid=1141905017634880&set=pb.100054461770567.-2207520000&type=3>

Innovation, novel methods or technologies used

WIPA's innovation lies in its modular and customizable recycling systems designed to process a wide range of plastics, including contaminated and post-consumer waste. These systems are engineered for energy efficiency, high throughput, and adaptability, allowing clients to tailor equipment configurations to their specific waste streams.

Novel features include integrated washing and drying lines, enabling complete in-house plastic processing, and friction washers that improve cleaning performance without excessive water use. This full-cycle approach, from shredding to drying, sets WIPA apart by combining durability, sustainability, and process flexibility.

Steps further and plans for the future

WIPA aims to expand its production facilities and workforce, continuing to innovate in recycling.

Key impacts - environmental, economic & social

- WIPA's recycling practices have significant environmental, economic, and social impacts.
- Environmentally, they help reduce plastic waste, lower carbon emissions, and support the circular economy by converting discarded plastics into reusable materials.
- Economically, the company creates skilled jobs and supports green entrepreneurship by enabling cost-effective recycling solutions for businesses.
- Socially, WIPA contributes to skill development and provides access to sustainable materials for creative and educational use, with the potential to empower communities and promote environmental awareness through local initiatives.

Qualities and criteria's to consider the practice effective, efficient, sustainable, transferable

Qualities	
Effectiveness: How well does the practice achieve its goals?	WIPA's practice effectively reduces plastic waste by converting both clean and contaminated materials into high-quality recyclates, adding value and enabling their reuse across various industries, including crafts and manufacturing.
Efficiency: Does the practice minimize resources while maximizing outputs?	The recycling systems are designed for low energy consumption and optimized processing, allowing for high throughput while minimizing water, electricity, and manpower requirements, ensuring maximum output with minimal resource use.
Sustainability: Does the practice contribute to environmental protection, social equality and long-term viability?	WIPA contributes to sustainability by supporting environmental protection through waste reduction, fostering social equity by enabling access to recycled materials and job opportunities, and ensuring long-term viability through durable, innovative technologies.
Transferability: Are the methods transferable in different contexts?	The methods and technologies used by WIPA are well-documented, modular, and customizable, making them easily transferable and adaptable to different geographic, economic, and operational contexts. Replication requires access to the machinery, basic technical training, and infrastructure for plastic collection and sorting.

Required Competences for the best practice implementation

Activities-to-competences mapping

Associated competences	
Knowledge	Circular economy principles, recycling processes, plastic material properties, mechanical engineering, environmental regulations, and system operation standards.
Skills	System design (CAD), machine assembly and operation, troubleshooting, quality control, communication, and use of digital tools for monitoring and interface navigation.
Attitudes	Innovation, sustainability focus, accountability, precision, adaptability, teamwork, and a user-oriented mindset.

Training needs required for successful implementation

- Successful implementation requires training in machine operation, maintenance, and safety, as well as understanding plastic materials and recycling processes. Basic digital skills are needed for using control systems, along with knowledge of sustainability principles and environmental compliance.

Lessons learned

- Key lessons from WIPA's practice include the importance of tailored recycling solutions, the value of technical training, and the impact of combining innovation with sustainability. Effective recycling requires both advanced technology and a strong commitment to environmental goals.

References / links

- <https://www.facebook.com/profile.php?id=100054461770567>
- <https://www.youtube.com/@WiPaGmbH>



Source:
Zuzanna Szczepańska
<https://unsplash.com/photos/blue-plastic-bottle-on-orange-surface-ayfiHJhrzn8>