

State-of-the-art food tech producing nutritious, upcycled ingredients at scale



Highlights

- 1 Transforming food byproducts (eggshells, spent grain & more) into nutrient-rich ingredients.
- 2 Patent pending tech can be applied to various food byproduct.
- 3 Multiple food and beverage manufacturers have expressed interest in licensing our tech.
- 4 Selected for The Kroger Co. Zero Hunger | Zero Waste Foundation Innovation Fund's 2021 Cohort
- 5 Majority women-owned business. Certified B Corp. Cohort
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- 6 The upcycled food industry worth \$46.7B+ in 2019 & expected to grow 5% annually over next 10 years.

Our Team



Sue Marshall

Proudly lives in Minneapolis, MN. She spends her days managing NETZRO's business development, contract negotiation, community development and collaborative planning activities. Sue is a founding & board member of The Upcycled Food Association.

I was driven to start a business that can make a difference in my lifetime. Tackling the food waste challenge in a way that can eliminate food from going to landfills while feeding more people was a no brainer. Powering earth's food forward can help solve social & environmental issues, and can create an equitable economic model for all people



Garrick Villaume

A native of St. Paul, Garrick cherishes Minnesota's natural beauty and innovative culture. Garrick designs processes and develops technology for solving complex resource challenges by replacing systemic deficiencies with sustainable businesses.



Reed Watson

Reed is driven to help leaders, companies & teams be wildly successful by accelerating growth, whether it's scaling up rapid growth in small/mid-cap & start-up companies, or building speed & double-digit growth in large companies.



Ashley Brown

Ashley's passion for environmental progress is matched only by her service-first mindset. She brings a strong background in sales and relationship building to the NETZRO team and is responsible for nurturing partnerships with producers and providers.

Pitch

We're developing groundbreaking, upcycling tech that tackles food waste head on. Join us.

NETZRO is currently preparing for a transformative stage of business growth. We are assembling capital resources and have built a team passionate about safe, scalable, and sustainable ways to reduce industrial food waste, while having an unparalleled impact on upcycled food potential.

The infographic features three circular icons on a background of industrial machinery. The first icon shows a dollar sign and an upward arrow, with text stating 'NETZRO has been operational and growing since 2015.' The second icon is a 'Certified B Corporation' logo, with text stating 'NETZRO is a woman-owned Specified Benefit Corporation.' The third icon is the 'UPCYCLED FOOD ASSOCIATION' logo, with text stating 'NETZRO is a founding member of the Upcycled Food Association.'

The Problem

Did you know when food rots in a landfill it creates huge amounts of methane gas? This methane is a green house gas more potent than carbon dioxide. It is estimated that between 6 to 8 billion pounds of food is wasted every year from food and beverage manufacturing. This food is often referred to as food byproducts.

Food and beverage manufacturers face growing regulatory and social pressure to divert their byproducts responsibly. In addition, they face increasing costs for disposal that affect their bottom line.

The infographic is divided into two main sections. The left section, titled 'The Growing Global Problem', features a factory icon and text: 'Food & beverage manufacturers create a lot of food waste.' Below this, a large arrow points to the number '6 billion pounds' with the subtext 'of food & raw materials'. The right section, titled 'The Impact:', lists two points: 'Lost Forever. Virtually ZERO goes back to human consumption.' and 'Landfills & Harmful Gases. Goes straight to landfills and becomes one of the leading sources of harmful greenhouse gases.'

Of food & raw materials is wasted every year from industrial food & beverage manufacturers.

Expensive For Everyone. Manufacturers waste expensive resources AND have a cost of waste removal, land application and landfill fees. Which passes on to consumers increasing the price of food.

The NETZRO Solution

NETZRO has proven that food byproducts can be safely recovered into upcycled food ingredients which is used in new food products. NETZRO's technology has recovered spent grains from breweries and distilleries into upcycled grains used in snacks, cereals, seasonings as well as milled as specialty flour. It has also recovered eggshells from liquid egg production into upcycled calcium and collagen. These are used as functional ingredients for nutritional benefits.

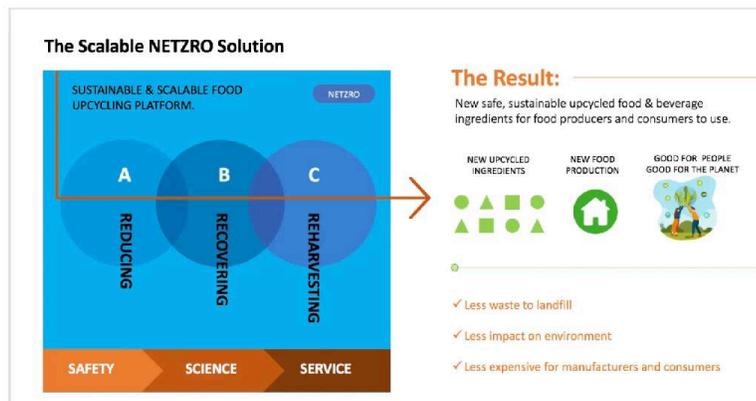
Our company has developed a proprietary state-of-the-art food upcycling platform that includes patent pending technology for licensing.



This technology helps power the safe capture and conversion of industrial food & beverage byproducts into new sustainable food ingredients at scale. It does this by using special infrared heating assisted with a rotational process which allows for thorough heating to completely dry into shelf stable food ingredients. The precise heat kills pathogens instantly without burning or degrading nutritional value. The process throughput is designed to be continuous flow and is able to handle large volumes. The patent pending technology can be installed at the end of a food production line or used in an independent food processing facility.

What we do

NETZRO has built an ecosystem and collaborative partnerships around eliminating food waste and improving the food economy. The platform was built with transformational change in mind; connecting the food supply chain not only farm to fork, but also fork back to farm. A true circular approach to our food system which is key to reducing the effects of climate change.



The platform provides support for our customers who license the technology

The platform provides support for our customers who license the technology. This includes consulting on facilities, transportation logistics, process throughput as well as market identification and sales.

How it all began

NETZRO initially worked with a small scale version of the technology to upcycle two types of food byproducts; eggshells and spent grain.



Eggshells

NETZRO sourced eggshells from liquid egg breaking facilities and research concluded that the technology was capable of separating the eggshell membrane from the eggshell creating two new upcycled ingredients, calcium and collagen. With a TAM (total addressable market) of 300 million pounds of eggshell waste every year, the potential to provide upcycled calcium and collagen to food producers as well as health & beauty industry is endless.

NETZRO has commercialized upcycled calcium for use as an ingredient in pet food. We are in development with food manufactures to use it as an ingredient in food products for human consumption. NETZRO has just completed a grant with Minnesota Department of Agriculture to commercialize upcycled eggshell collagen for human consumption.

The next phase includes the design of ancillary equipment to assist the NETZRO technology in capturing the full potential of the upcycled collagen for human health.

Brewer's spent grain

NETZRO's second upcycled byproduct was spent grain from the brewing and distilling industries. The TAM of 20 billion pounds of spent grain annually in the US, we can feed more people better without growing more grain. This will allow farmers to grow new perennial grains such as Kernza®.



The grain is recovered from the brewing and distilling process and upcycled as an ingredient for human and pet food, as well as premium animal feed. NETZRO partnered with Utepils Brewery in Minneapolis, MN to test a small version of the technology onsite.

Proof of Concept for NETZRO

After our extensive research and development, and completion of a pilot project using our prototype machine, we designed and built our first commercial upcycling platform. In 2020 we co-located with Tattersall Distilling to launch our proof of concept phase and engaged with all of our community stakeholders. This video shares what went into this project and how this model can work in local communities across the country and the world.



The Upcycled Food Movement opportunity

Food upcycling is a new and rapidly growing double-sided industry. According to www.futuremarketinsights.com, in 2019 the global market opportunity from food waste was \$46.7 billion. Food byproduct providers are seeking new ways to reduce food waste, and new food producers are seeking new sustainable functional ingredients. This gives NETZRO the potential to scale its patent pending technology to meet increasing market demands. Upcycling at this scale has the potential to reduce greenhouse gasses, enable sustainable agriculture, and fight hunger by providing a new nutritious food source.

This video from the Upcycled Food Association "What is Upcycled Food" explains this movement and introduces the Upcycled Certification which is key to this growing industry. NETZRO is proud to be founding member of UFA.

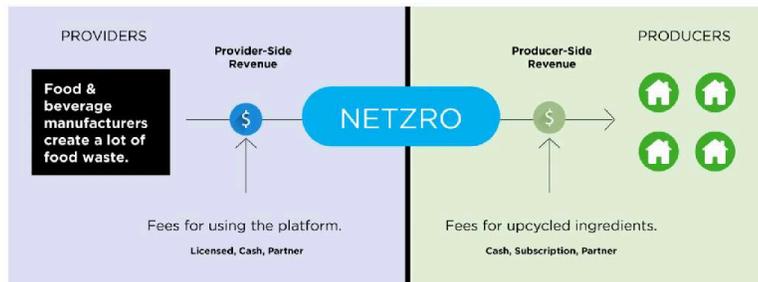


Interest in upcycled food grew in 2020 by 128% with Whole Foods naming upcycled foods top 10 trend. In addition, Anheuser-Busch invested 100 million

upcycled foods top to trend. In addition, Anheuser-Busch invested 100 million dollars into its facility to upcycle barley byproduct. Big food companies are starting to look at it as better efficiency for their production. Sales of upcycled food products within the Upcycled Food Association membership grew to \$179 million in 2020 from \$102 million in 2019. The upcycled food movement will capture \$1 trillion dollars of food value that is wasted each year. Upcycling is now “the new recycling,” presenting an attractive opportunity for businesses to curb food waste and loss, while scaling a host of new value-added food and beverage products from food byproducts.

The Market Opportunity for NETZRO

NETZRO is strategically positioned between the food and beverage companies that can supply food byproduct in large volumes consistently, and food producers looking to source new sustainable food ingredients at scale.



Being a bridge to connect this gap in the food supply chain assists in reducing food waste. NETZRO’s technology recovers the food byproduct that would otherwise go to waste or underutilized. NETZRO is able to reharvest food at a lower cost than growing more food. This allows farmers to practice regenerative agricultural practices such as crop diversity. And our partners to create a new food ecosystem and source of revenue within the green economy, all without growing more food.

NETZRO is Pioneering & Powering
The Upcycled Food Movement

NETZRO is at the center of the new food upcycling movement.

Food upcycling is a new and rapidly growing double-sided industry with food byproduct providers and new food producers desperately looking for proven upcycling support at scale.

<p>\$46.7 Billion</p> <p>The global products from food waste market size in 2019.</p> <p>www.futuremarketinsights.com</p>	<p>60%</p> <p>Of people surveyed want to buy more upcycled food products.</p> <p>www.upcycledfood.org</p>
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Where we go from here

Now that NETZRO has proven its technology’s capability of recovering byproducts by consistently selling upcycled ingredients, discussions with several organizations are ongoing to license the technology. NETZRO licensing model consists of making money through engineering fees, markup on equipment, ongoing license fees as well as royalties from the sales of the upcycled ingredients.

Moving into our own processing facility at the Wycliff Building in St. Paul, MN, will allow for upcycling grain byproduct from breweries and distilleries in the Twin Cities at scale. In addition, the new space allows for NETZRO to relocate its research and development lab from Lino Lakes, MN. This location is conveniently located near its various local research and business partners as well as several breweries & distilleries. Some of NETZRO’s local relationships include

as several breweries & distilleries. Some of NETZRO's local relationships include Field Theory Foods, Midwest Northern Nuts (We Are Nuts), Bakers Field Flour & Bread, The Upcycled Food & Collaborative Kitchen, Agricultural Utilization Research Institute (AURI), University of St. Thomas and various groups within the University of Minnesota.

NETZRO Growth Opportunities Today and Beyond

BREWERY & DISTILLERY SPENT GRAIN

NETZRO's first large-scale projects recover and reharvest **Spent Grain** from distilleries into low-carb, high-protein, high-fiber, commercial-grade, sustainably farmed & organic grain or flour for upcycled food producers to use as safe new ingredients.

▶ **Tattersall Distilling**
Minneapolis

▶ **Twin Cities Spent Grain Coop.**
Minneapolis

Potential Future Byproduct Provider Clients: Cashfire Distilling, Dual Citizen Brewing, L.F. Bridge Brewery, Tommas Farms, Mate Food Not Waste, and others.

Potential Future NETZRO Upcycled Ingredient Producer Clients: Matriark Foods, We are Nuts, Bernatillos, Barila, Field Theory, Shamrock Park, Rutherford & Meyer, and others.

NEXT UP

Eggshell capture & conversion into safe multi-purpose calcium/collagen ingredients

Water waste capture & conversion.

- Licensing platforms
- Exploring new by product streams to process
- New uses for upcycled ingredients

Together we can eliminate food waste, feed more people, and save the planet!

With the funds raised in this campaign we will be able to finish the buildout of our new manufacturing space, buy automated loading equipment & supplies and hire two additional team members. Thank you for your consideration in making an investment and being a part of the journey!



Downloads

[Analytics Insight NETZRO CTSO Garrick Villaume With Front Cover.pdf](#)