




Technology | License Proposal

Processing unrecyclable plastic feedstock into Smart Gravel™ and Arqlite composite pellets for plastic extrusion and injection molding

August 10th, 2022

A large pile of plastic waste, including bottles, containers, and other debris, is shown on a beach. The background shows a cloudy sky and the ocean.

Globally, 71% of plastic waste goes to landfill or is incinerated

400M tons discarded every year,
expected to double by 2050

The pressure on businesses to
address the damaging impacts is
mounting

Innovation is needed

A construction site with a large pile of sand. A worker wearing a yellow hard hat and a green safety vest is visible in the background. The scene is dimly lit, possibly at dusk or dawn.

There is an ever growing problem for the built environment

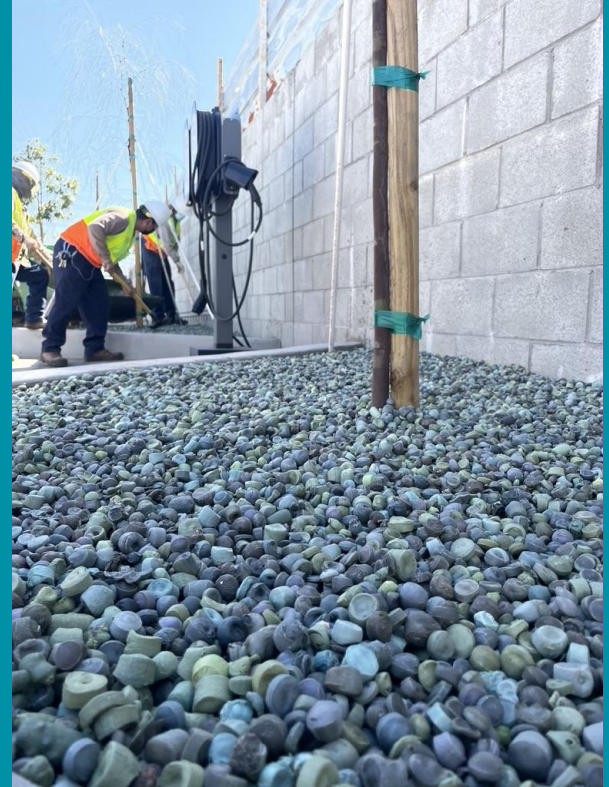
The scale of the materials impact on
climate & the environment is widely
known

The pressure on businesses to
change & deliver solutions is
mounting

Arqlite exists to reduce our plastic waste stream & create the most sustainable urban design materials; actively creating a positive impact on our natural environment, climate, people & business.

We upcycle plastic waste while reducing CO2 emissions, innovating large-scale industry solutions to build a truly resilient and sustainable future.

Arqlite transforms mixed plastics into low CO2 materials

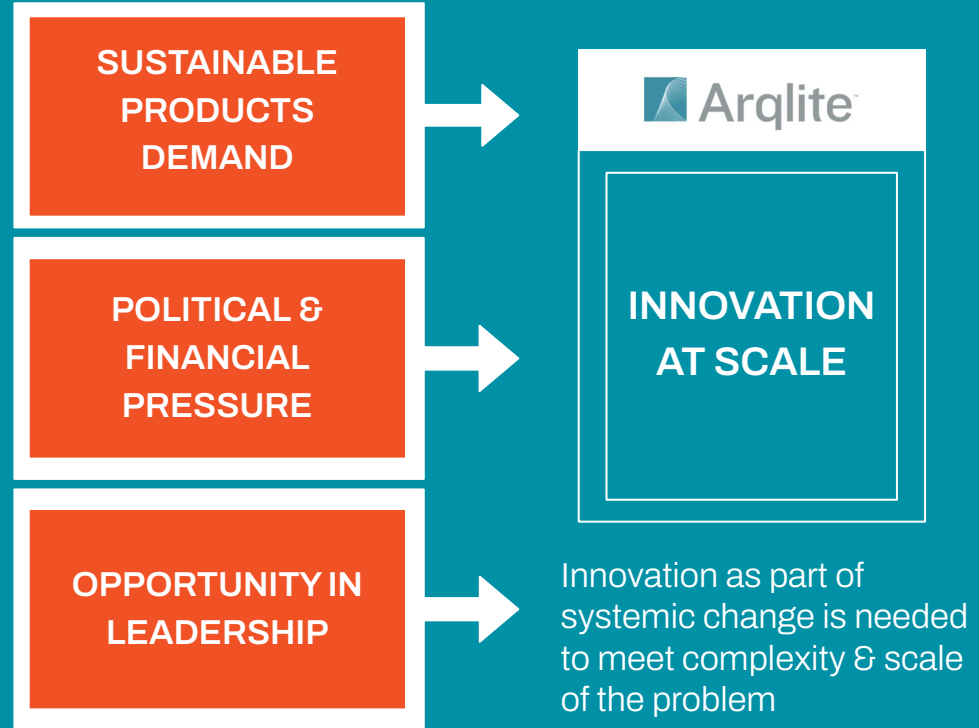


Market is primed for solutions that can deliver at scale

Increasing demand to produce tangible, environmentally friendly solutions

Regulatory & Policy shifts, growing influence of NGOs, societal awareness & financial influence from climate risk

Clear opportunity in leadership for those that can deliver competitive, measurable & impactful solutions



Arqlite was founded in 2015 & is now recognised by major independent industry bodies & partnered with global investors

2015-2017	2018	2019	2020-2021	2022
INCORPORATION / R&D BREAKTHROUGHS Developed the first process capable of recycling mixed plastics	PILOT FACILITY First industrial pilot built in Argentina Technology & product validation	GO TO MARKET & KEY INVESTORS Cemex and Coca-Cola becoming investors in Series A 1st product: Smart Gravel for drainage	U.S SET UP, NEW R&D, PRODUCTS & MARKETS 10X US Facility setup during a pandemic 2nd product: Micromini Smart Gravel for concrete	R&D SMART REPRO PELLET Developed a raw material for the plastic industry 3rd product: Repro pellets for plastic parts manufacturing



Arqlite provides the only solution competitively able to recycle up to 10 tons per hour, focusing on the un-recyclable thermoplastics

The result is an eco-friendly material which meets the needs of multiple industries & society as we transition to a low-carbon economy

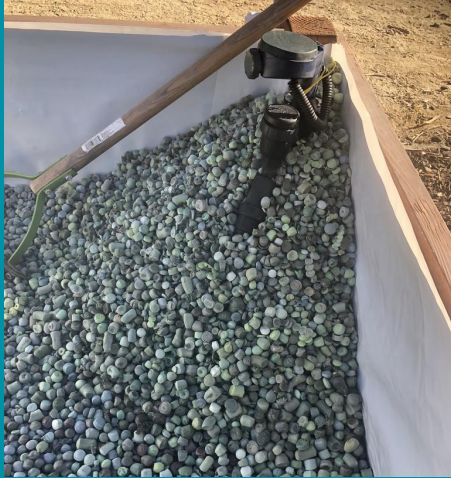
Our technology solution addresses key environmental issues in both its production and its use, significantly increasing recycling capability while reducing CO2 emissions

A photograph of an industrial facility. In the foreground, there is a large blue machine with two green electric motors. It is processing a large quantity of small, green, granular material. The machine is mounted on a metal frame. In the background, there are more industrial structures, including a large blue cylindrical tank and various pipes and electrical control panels. The overall scene is a busy industrial environment.

Standard setup scalable up to 10 tons/ hour

Los Angeles, California - Facility

Current product portfolio



Regular & Mini Smart Gravel
for backfill, drainage,
hydroponics, +



Micro Mini Smart Gravel
for building and precast
concrete



Composite plastic pellet
for extrusion and injection
molding



Superior to existing aggregates & other alternatives
notwithstanding its environmental benefits

- 3X lighter
- 10X better insulator
- Inert & pH-neutral
- Long-lasting
- Leachate-free























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Homogenized composite plastic pellets contributing to a reduction in feedstock costs

- Extrusion and injection molding of PP and PE products
- 60% LDPE / 30% Polyesters / 10% PP
- Mixed up to 20% with pure resins
- Certified 100% recycled

Download the [SDS and tech file](#)

Both production & use delivers against multiple SDGs

Impact		Sustainable Development Goal
1	Raises building energy efficiency By lowering weight and increasing insulation	  
2	Minimises transport pollution Due to its lightweight and local production	   
3	Less water use Doesn't require pre-hydration	   
4	Deviate plastic from landfills/incineration	   
5	Avoids ocean pollution 1 truckload of plastics hits the ocean every 30 sec	  
6	No quarry mining Mining the landfill not the earth	   

One truckload of Arqlite products results in...



14.6m 'un-recyclable' plastic wrappers
diverted from the environment



- 6.7 tons CO2 Compared to expanded clay



Virgin plastic value retained in a
circular economy system

Arqlite licensing is based on a trade secret process and R&D partnership to scale up sustainable practices

- Initial market assessment
- Tailored hardware design
- Installation supervising
- Commissioning
- Market development
- Customer referrals

Output can be used for sale or for internal use

Four sources of revenue - per ton

RECYCLING FEE

10% of revenue per ton

Charging competitively vs landfill fees, plastic feedstock becomes a revenue generator instead of an overhead

- Capacity increases
- Meets total customer needs
- Measureable mitigative impact

PLASTIC CREDIT

7.5% of revenue per ton

Enables trading in plastic credits

[How plastic credits work](#)

- Creates additional value from existing service
- Funds recycling infrastructure
- Measureable mitigative impact

CARBON CREDIT

2.5% of revenue per ton

Enables trading in carbon credits due to CO2 per ton reduction in production, transport & use

- Creates additional value from existing service
- Funds climate action
- Measureable mitigative impact

PRODUCT SALES

80% of revenue per ton

B2B (70%) & B2C (30%) product sales to the Built Environment and the plastic industry

- End product sales in to growth markets
- Recycling value at scale
- Measureable mitigative impact

Projected P&L

- 2 tn/hour line
- 2 shifts
- 70/30 bulk/retail mix
- Average US labor and energy costs
- Values in USD

Payback 7-10mo

			Key Considerations			
Equipment		Year 0 Set up Costs		4-year Ops Cumulative Total		
Shredder & Conveyor	472,000	1	CAPEX Expenditure	2,426,735	Revenue	24,953,152
Cleaner	-	-	Installation Expenditure	TBD	Set Up	2,626,735
Silo	207,368	1	Franchise cost	200,000	Franchise	800,000
Extruder	1,730,344	2	Initial Year 0 Costs	2,626,735	Op Costs	4,849,944
Total	2,409,712		Average Margin	397,984	Net Margin	16,676,474
			Payback (Months)	7		

Economic Impact							
Year	Year 0	Year 1	Year 2	Year 3	Year 4	Cumulative	Monthly Avg
Output (Tons)	-	7,336	7,308	7,308	7,280	29,232	609
Total Revenue	-	5,835,424	6,372,576	6,372,576	6,372,576	24,953,152	519,857
Product Sales	-	5,085,920	5,554,080	5,554,080	5,554,080	21,748,160	453,087
Carbon Credit	-	13,384	14,616	14,616	14,616	57,232	1,192
Plastic Credit	-	334,600	365,400	365,400	365,400	1,430,800	29,808
Recycling Fee	-	401,520	438,480	438,480	438,480	1,716,960	35,770
Expenses							
Arqlite Fees	-	426,800	425,400	425,400	424,000	1,701,600	35,450
Production Royalty	-	366,800	365,400	365,400	364,000	1,461,600	30,450
Remote Support	-	60,000	60,000	60,000	60,000	240,000	5,000
Franchise Fees	200,000	200,000	200,000	200,000	200,000	1,000,000	20,833
Franchise Initial Fee	200,000	-	-	-	-	200,000	4,167
Franchise Annual Co	-	200,000	200,000	200,000	200,000	800,000	16,667
Total Production Co	-	788,196	787,671	787,671	784,806	3,148,344	65,590
Production Energy	-	455,723	454,030	454,030	452,336	1,816,118	37,836
Production Labor	-	307,043	305,871	305,871	304,699	1,223,484	25,489
Production Supply	-	25,430	27,770	27,770	27,770	108,741	2,265
Total Margin	(200,000)	4,420,428	4,959,505	4,959,505	4,963,770	19,103,208	397,984
Margin %	0.00%	75.75%	77.83%	77.83%	77.89%	76.56%	76.56%

LICENSEE INVESTMENT

\$1m secures a 5-year license

payable over the 5 year period

\$2.5M CAPEX secures full service set up

Processing 2 ton/hour (6 cubic yards/hour)

Scalable up to 10 ton/hour (20 cubic yards/hour)

Optional low footprint dry cleaning process to recycle dirty post-consumer plastics

RETURN ON INVESTMENT

76%

Average gross margin

7 months

Average payback time

5X

Expected growth multiple in plastic & carbon credits
in the next five years
(figures provided on value as of 2022)

With proven applications into major growth markets

- Waste Management \$715B | CAGR 6.1%
- Concrete \$972B | CAGR 4.7%
- Hydroponics \$18.5B | CAGR 11.29%
- Feedstock suppliers \$67B | CAGR 7.19%

*Stats by 2030

With further value generation for your business

NEW REVENUE

New product sales

Carbon credits

Plastic credits

Recycling fees

RISK REDUCTION

Future proof vs regulations

Ongoing service support

Revenue diversification

LEADERSHIP

Brand building

Margin gain/protection

Political favour



Technology | License Proposal

Proposal for the licensing of hardware technology (HAAS) to process unrecyclable plastic feedstock into Smart Gravel™ and Arqlite composite pellets for plastic extrusion and injection molding

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