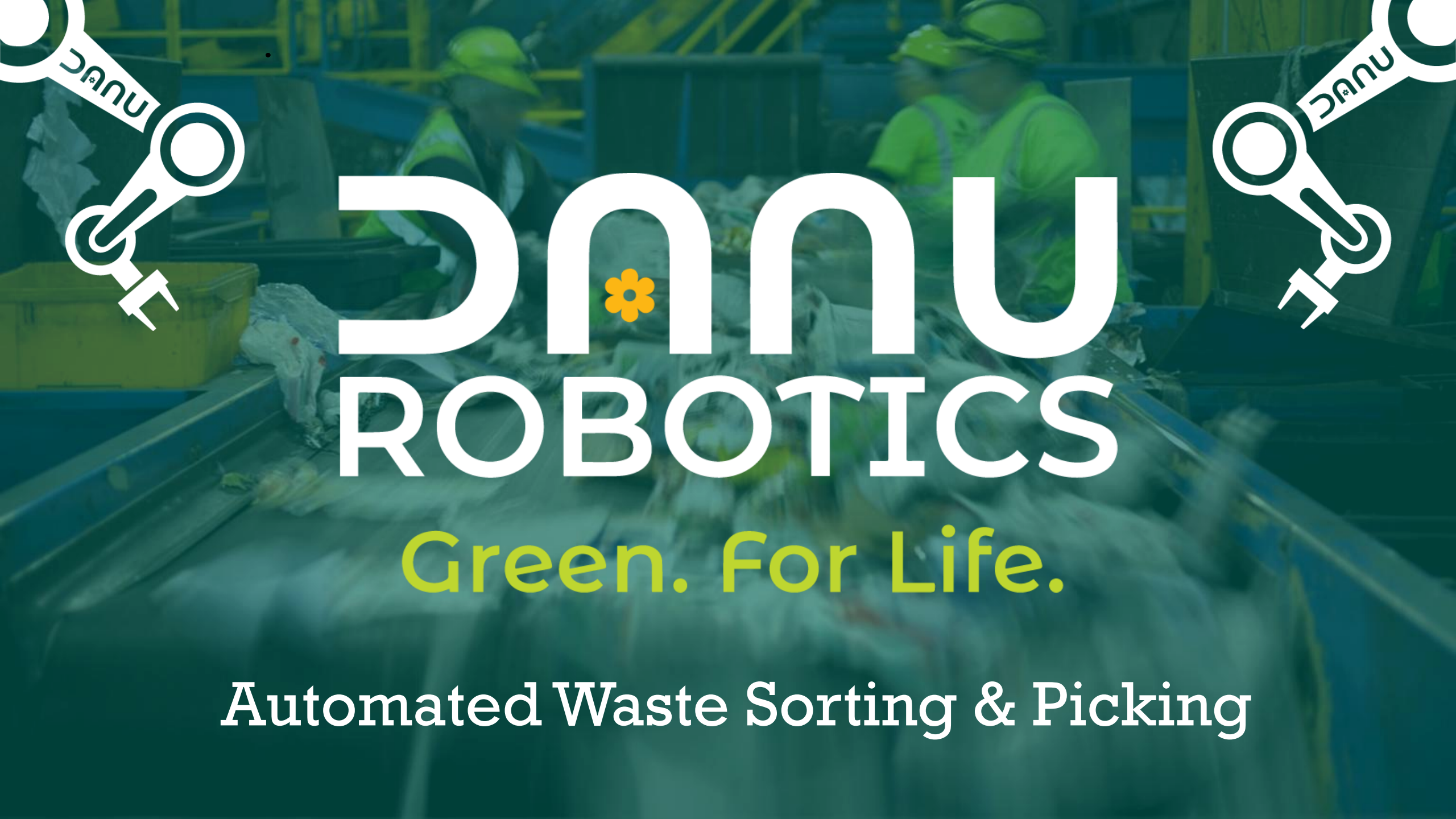




Dnnu ROBOTICS

Green. For Life.

Automated Waste Sorting & Picking

All recycling facilities reliant on slow manual sorting



Low quality recyclable outputs => **Low revenue**

Raising labour costs

Raising labour shortages

Increasing environmental & regulatory costs

This is not our future





Large, heavy and expensive robotic arms and vacuum grippers are **failed solutions**

Waste management companies are decommissioning these robots



Danu H.E.R.O Series Two

- Small Footprint – Drop-in System
- Retrofit and Easy Integration
- Accurate AI & Precise Waste Picking
- Replaceable Fingertips for a Wide Range of Waste Handling
- Multi-Picker & Multi-Tasking Capability
- Reconfigurable and Adaptable to New Materials
- Flexible – Can Scale Up & Scale Down
- Energy Efficient
- Easy Maintenance

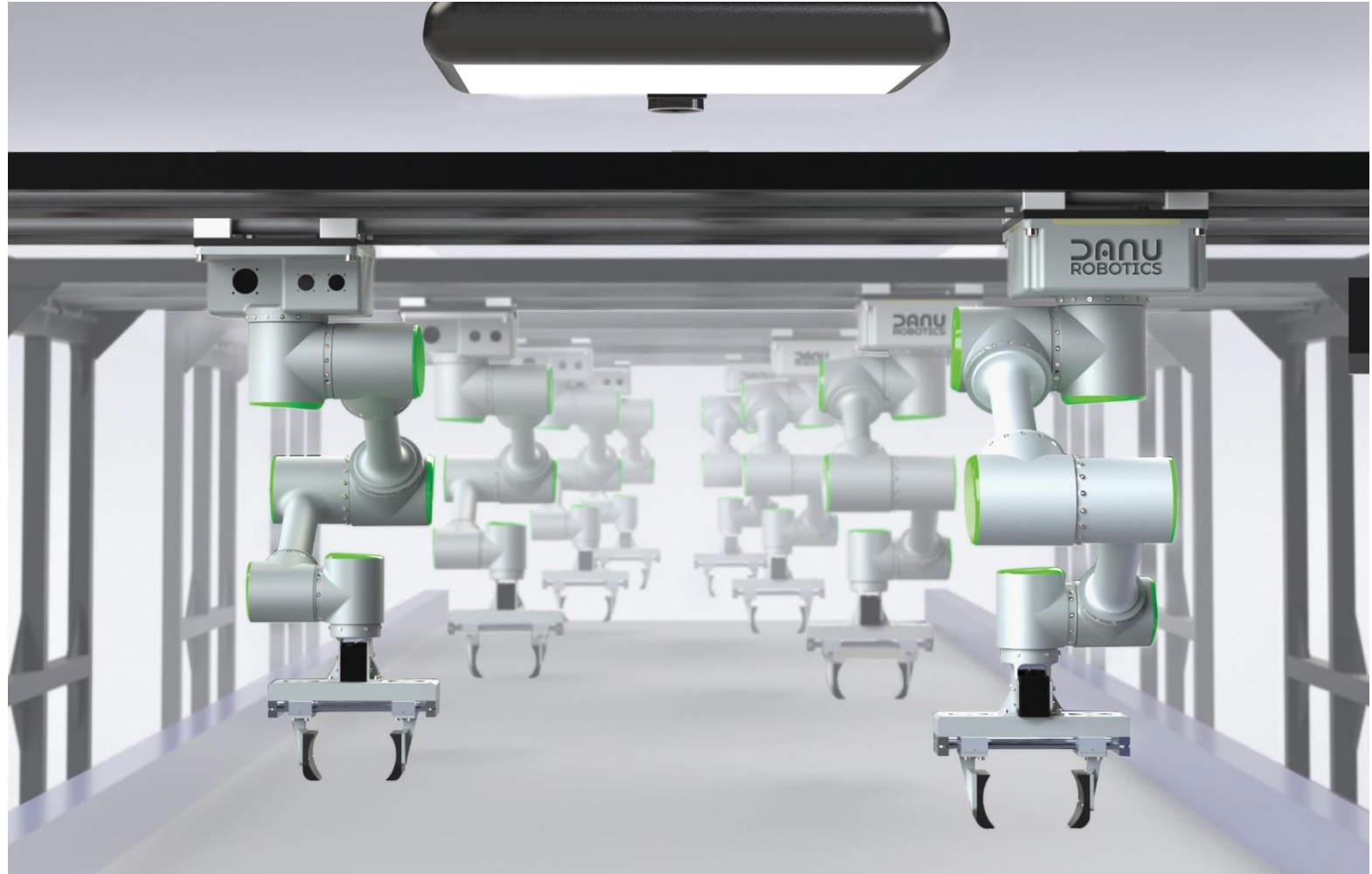


Danu H.E.R.O Series Two

Our solution – H.E.R.O

AI guided, multi-arm, multi-tasking robotic sorting system

- Retrofittable
- Cost-effective
- High precision grippers
- Highly scalable
- 10x more cost effective than human pickers
- ROI within 12 months



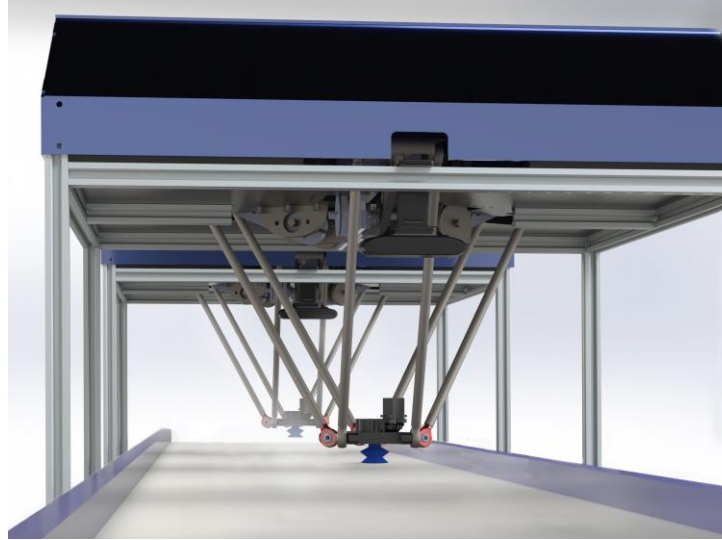
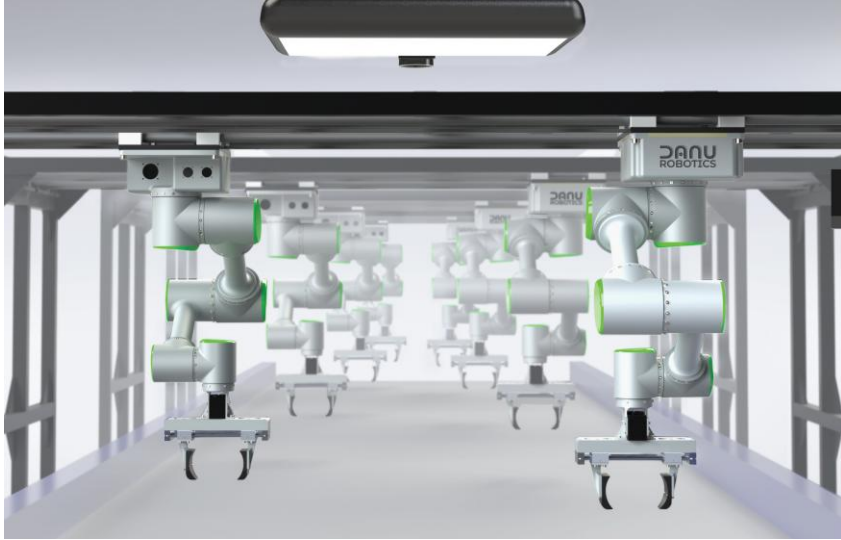
H.E.R.O – High performance, environmentally friendly, reconfigurable operator.
Eight or ten pickers can pick out different materials simultaneously and auto the complex waste sorting process

H.E.R.O increases revenue and profit

- Modular system can retrofit into any recycling facilities with two engineers and a few hours time
- High quality recyclable output lead to increased revenue
- Reduce HR costs ranging from 30% to 70%
- 50% cheaper and more productive than current robotic sorters
- Reconfigurable to sort out many waste materials



Competitive advantages



Can retrofit into any recycling facilities worldwide regardless of its size, current technology level and location

	Accurate Identification	Successful picking rate	Retrofittable & configurable	Energy Efficient	Full Automation
Danu Robotics	Y	100%	Y	High	Y
AMP Delta Robot	N	60-70%	N	Low	N
Recycleye	N	50%	N	Medium	N

Production system commissioned in June



Business model 1

Product	Hardware	Monthly licensing fee
H.E.R.O. Model One (2-picker system)	£120,000	£1,500
H.E.R.O. Model Two (4-picker system)	£240,000	£3,000
H.E.R.O. Model Three (8-picker system)	£480,000	£6,000

Hardware payment ; manufacturing, assembly and installation
Monthly licensing fee; use of AI and a comprehensive professional services

Our customers can expect to recoup the initial investment within 12 months time.

Danu H.E.R.O Series Two:

Annual revenue: £137,377

Year 1 cost: £120,000 + £18,000 = £138,000

Year 2 and afterward: £18,000 per annum

Manual sorting labor cost:

£28,000 - £35,000 per person per annum

Future business models

Business Model 2: Robots/AI Data Analytics-as-a-Service

- **No upfront CapEx** for customers.
- Customers pay a **fixed monthly fee (~£5,000/month)** to lease and operate the robotic system.
- Includes hardware, software, maintenance, and updates, creating predictable **recurring revenue** with strong margins.

Business Model 3: Licensing & Revenue Sharing

- Designed for **cost-sensitive markets** (e.g., Southeast Asia).
- Danu Robotics provides the system with minimal upfront cost, and **shares a percentage of the revenue** generated from recovered recyclable materials.
- Scales quickly in emerging markets while aligning incentives with customers.

Highly experienced team



CEO
Xiaoyan Ma



CTO
Ben Bamford



COO
Ceri Shaw



**Robotic Software
Engineer, Dr. Balint
Thamo**



Director of Sales
Tia Wan



**Computer Vision
Research Engineer,
Dr. Ahmed Raza**



**Computer Vision
Engineer, Tiago Le**



Electrical Engineer
Osama Tariq



**Robotic Hardware
Engineer, Younes
Bouhoun**



From Waste to Wealth: Fueling a Circular Future.

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Our solution - accuracy

Our Computer Vision System

Our computer vision system identifies objects by their **shape and edges** rather than relying on bounding boxes, enabling the use of **more reliable and precise mechanical grippers**.

Defensibility:

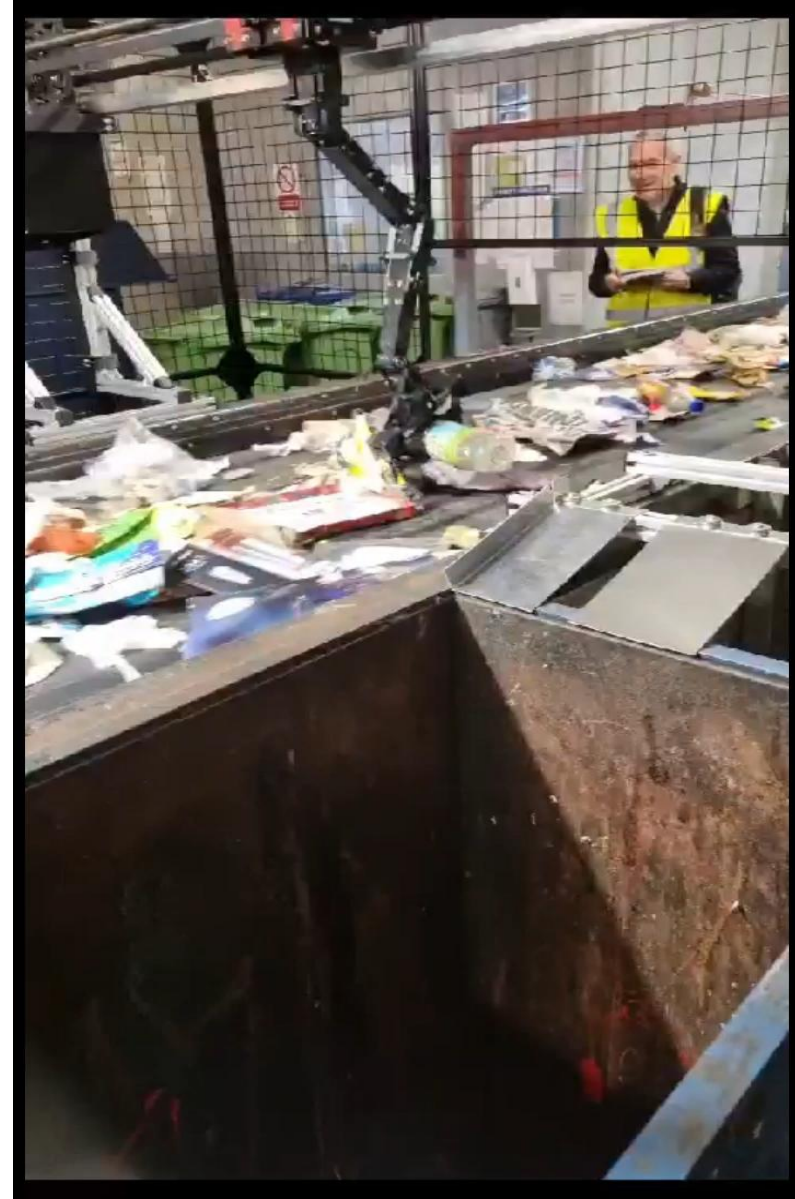
- Access to customers' waste data
- Large and expanding data lake
- Dedicated and unique data annotation team



Technology protection

- The whole centralized multi-agent system design (patent pending). Any company want to develop a multi-picker system with only one control system (brain) need to license technology from Danu Robotics which is protected by this patent
- Individual robotic picking system design (patent granted)
- The unique object tracking system design (patent pending)
- Software system design (patent pending)
- Trademark over our brand and logo

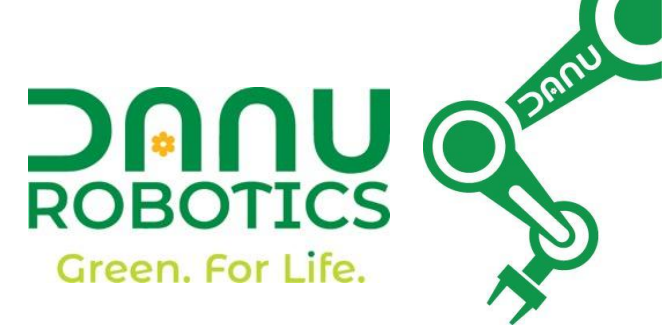
Glasgow City Council Beta System Live Testing





Cost Metrics – a ‘good’ human picker

Best and unreality scenario:



A shift is 8 hours minus lunch and two 15 min tea breaks,
6.5 hours work = **390 minutes**

@ 45 PicksPerMinute that's **17,550 picks per day**

5 shifts a week delivers **87,750 picks per week**

48 weeks a year = **4,212,000 picks per year.**

Wages cost to MRF of £32k/year

4.2m picks for £32k = **131 picks/£**

74 tons/year

50:50 PET (15gms) & Alum cans (20gms)

31.59 tons of PET & 42.12 tons of cans

PET \$285/ton Value = £6752.4

Alum \$1650/ton Value = £52,123.5

Exchange rate 0.75USD/GBP

Value = £58,875.9

the recyclable values in California as of Dec
2024

Cost Metrics – a *Danu 2 arm picker*

Year One Payback - apples to apples comparison with humans sorting



1x8 hour shift per day = 480 minutes

@ 45 PPM that's 21,600 picks per day

5 shifts a week = 108,000 picks per week

48 weeks a year = 5,184,000 picks per year

Capex & License fees in year 1 is £138k
(£120k +£18k/year for maintenance, service, AI & software)

5.2M picks for £138k = **37.6 picks/£**

5.2M picks for £18k = **288 picks/£ 2.2X**

91 tons/year

50:50 PET (15gms) & Alum cans (20gms)

38.88 tons of PET & 51.84 tons of cans

PET \$285/ton Value = £83,10.6

Alum \$1650/ton Value = £64,152

Exchange rate 0.75USD/GBP

Value = £72,462.6

the recyclable values in California as of Dec 2024

Cost Metrics – a *Danu 2 arm picker*

Most common scenario for using our robots:



1x10 hour shift per day = 600 minutes

@ 45 PPM that's 27,000 picks per day

14 shifts a week = 378,000 picks per week

52 weeks a year = 19,656,000 picks per year

Capex & License fees in year 1 is £138k
(£120k +£18k/year for maintenance, service, AI & software)

344 tons/year

50:50 PET (15gms) & Alum cans (20gms)
147.42 tons of PET & 196.56 tons of cans

PET \$285/ton Value = £31,511

Alum \$1650/ton Value = £243,243

Exchange rate 0.75USD/GBP

Value = £274,754

the recyclable values in California as of Dec 2024

19.6M picks for £138k = **142.4 picks/£ 1.09x**

19.6M picks for £18k = **1092 picks/£ 8.3x**

Cost Metrics – a *Danu 2 arm picker*

Possible scenario for using our robots:



1x12 hour shift per day = 720 minutes

@ 45 PPM that's 32,400 picks per day

14 shifts a week = 4,536,000 picks per week

52 weeks a year = 23,587,200 picks per year

Capex & License fees in year 1 is £138k
(£120k +£18k/year for maintenance, service, AI & software)

19.6M picks for £138k = **171 picks/£ 1.3x**

19.6M picks for £18k = **1310.4 picks/£ 10x**

413 tons/year

50:50 PET (15gms) & Alum cans (20gms)
176.90 tons of PET & 235.87 tons of cans

PET \$285/ton Value = £37,813

Alum \$1650/ton Value = £283,044

Exchange rate 0.75USD/GBP

Value = £320,857

the recyclable values in California as of Dec 2024

Cumulative Profit Comparison for Customer

