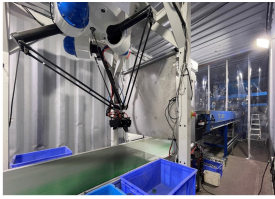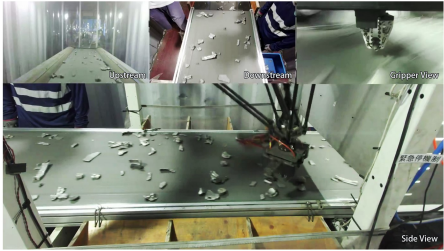## 應用案例 / Applications

部署於客戶現場的 MightySort™原型機
MightySort™ prototype deployed at client's site

@ 香港-元朗
Yuen Long, Hong Kong

@150mt/d | ↓74% | 11 months

客戶一間日吞吐量為150公噸的工廠，藉助8臺MightySort™智能機械人分選系統，可節約 74% 人力開銷 (相當於每月節省63萬元)，進而可在 11 個月內收回前期投入。同時，可顯著提升生產線自動化水平，並大幅降低噪聲及揚塵污染。
The client's factory, with a daily throughput of 150 metric tonnes, can save 74% on labour costs (equivalent to a saving of HK$ 630,000 per month) by using eight MightySort™ intelligent robotic sorting systems, and the payback period is only 11 months. In addition, the level of automation is improved and noise and dust are drastically reduced.

多視角系統實際運行情況
Multi-view screen of the actual operation of the system

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Hong Kong Science Park,
Pak Shek Kok, N.T., Hong Kong

Version: 2023.1

時宜機械人科技(香港)有限公司
SOTA Robotics (HK) Limited

#資源回收 #固廢審計 #ESG
先進自動化解決方案
Advanced automation solutions for
#waste sorting #auditing and #ESG

香港首家工業級有色金屬負向分選機械人系統提供商
Hong Kong's first industrial-grade non-ferrous metal
negative sorting robot system provider

獲大學科技初創企業資助計劃/
香港科學園創科培育計劃支持

ITC	HKSTP
TSSSU	Incubation
2023-2024	2023-2026

願景:用尖端機械人科技賦能全球回收鏈
Vision: Empowering the global recycling chain with state-of-the-art (SOTA) robotics technology

使命:路不拾遺，時宜拾遺
Mission: 撿多點，撿少點
Sort more. Dump less.

公司簡介 / Company Info

時宜機械人科技2022年成立於香港中文大學。致力於研發和銷售高價值固廢分選、審計和ESG自動化解決方案，推動全球回收鏈技術革新和社會可持續發展。通過紮實的研究和與行業的密切合作，已開發多種先進機械人產品，包括有色金屬負向分選機械人系統，智能分選回收箱，以及芯片回收微型工廠。公司專有的感知、識別、機構和控制技術為客戶提供了精確、高效、高性價比的產品。

目前，固體廢物的拆解、分離和分選仍依賴人工。時宜致力於利用最先進的機械人及人工智能技術，以客戶需求為導向解決這一問題，為環境保護和社會的可持續發展做出積極貢獻。

SOTA Robotics was founded in 2022 at The Chinese University of Hong Kong. We are committed to the R&D and sales of automated waste sorting, auditing and ESG solutions, and to promote technological innovation and sustainability in the global recycling chain. Through solid research and close collaboration with the industry, we have developed advanced robotic products, including non-ferrous mixed metal sorting system, smart recyclables sorting bin and IC recycling microfactory. Our proprietary perception, recognition, mechanism and control technologies provide customers with accurate, cost-effective and efficient (ACE) products.

To date, the disassembly, separation and sorting of solid waste still relies on manual labour. SOTA Robotics is committed to using state-of-the-art robotics and AI to solve this problem based on customer needs, thus making a positive contribution to environmental protection and sustainable development of society.

創始團隊 / Founding Team

陳翡 助理教授
Prof Fei CHEN
董事會主席，首席執行官
Chairman, CEO

董志鵬 博士
Dr Zhipeng DONG (Damon)
首席運營官
COO

王世雄 博士
Dr Shixiong WANG
首席技術官
CTO
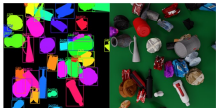
技術實力 / Technologies

15+ yrs
機械人及人工智能研發經驗
Experience in robot and AI R&D

8+
知識產權
Intellectual property

4+
自主研發智能分選多項關鍵技術
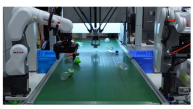Domains mastered for smart sorting

大數線&人工智能技術
Big data & AI technology

多傳感器融合&識別定位技術
Multi-sensor fusion & detection technology

機電一體化氣動機構技術
Mechatronics & pneumatic technology

高速高精度協同控制技術
High-speed & precision control technology

主要客戶 / Major Clients

大正金屬
Delta Metal
中國再生鋁合金生產龍頭企業
China's leading secondary aluminium alloy production enterprise

威立雅
Veolia
法國跨國環保集團
French multinational environmental protection group

碧瑤
Baguio
港股上市公司，香港主要固廢管理承包商
Hong Kong listed company and major solid waste management contractor

義合環保
Yee Hop
持牌芯片回收及處理商，微軟合作夥伴
Licensed chip recycler and processor, Microsoft selected partner

服務保障 / Service Guarantee

我們提供包括產品選型、應用部署、維修質保、在線診斷等產品全生命週期服務。
We provide full lifecycle service, including product selection, application deployment, maintenance warranty, online diagnostics, and more.

7×24h
全天候響應
Response

<12h
提出解決方案
Solution

<36h
恢復設備運行
Repair

核心產品 / Core Products

MightySort™
有色金屬負向分選機械人系統
Non-ferrous metal negative sorting robotic system

掃碼了解更多
Scan qr-code to learn more

10+
可分選混合鋁金屬廢料中10餘種雜質，並可根據用戶需求進一步拓展
Sorts more than 10 types (expandable) of impurities in scrap metal (mainly aluminium)

可處理雜質類型(從左至右)：鋁罐，海綿，帶膠線，橡膠，塗層金屬，電路板
Handleable impurities (from left to right): can, sponge, tube, rubber, painted metal, PCB

分離度(DoS)：>80%
單機可分離來料80%以上的雜質
Separates more than 80% of the impurities in incoming materials

處理量(HC)：30mt/d
單機日處理量達30公噸，替代4~5名工人
The daily handling capacity reaches up to 30 tonnes and replaces 4~5 workers
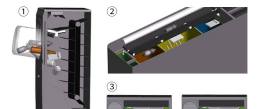

MagicSort™
城市可回收物智能分選回收箱
Urban recyclables smart sorting recycling bin

掃碼了解更多
Scan qr-code to learn more

4+1
可識別並分選4類可回收物及雜質
Can identify and sort 4 types of recyclables and impurities

3+20
3項核心功能，20餘項支援功能
3 core functions, more than 20 supporting functions

核心功能：①批量混合投入 ②智慧識別分選 ③動態容積調整
Core functions: ① Mixed feeding in batch ② Intelligent recognition & sorting ③ Dynamic volume adjustment

MicroSort™
集裝箱式芯片自動回收微工廠
Containerised automatic IC recycling microfactory

主要功能:
Main Functions:
- ✓ 解焊 Desoldering
- ✓ 芯片類型識別 Chip type recognition
- ✓ 芯片質檢 Chip quality inspection
- ✓ 按類及質量分選 Sort by category and quality
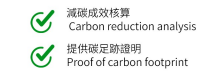

SOTABrain™
通用智能回收設備運維及碳資產綜合管理雲平台
General cloud platform for smart recycling equipment O&M and carbon asset management

主要功能:
Main Functions:
- ✓ 雲端同步數字孿生 Digital twin
- ✓ 遠程維護支持 Remote support
- ✓ 減碳成效核算 Carbon reduction analysis
- ✓ 提供碳足跡證明 Proof of carbon footprint