



Circularity, Anywhere, Everywhere

LOCAL GOVERNMENT SMARTCITY PROPOSAL

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Over 300 million tonnes of waste plastics are produced world wide, every year! Each, accumulates CO2 emissions from extraction, oil refining, polymerisation, product manufacturing, transportation and disposal that totals up to 11-times the weight of the product itself!

Recycling is not enough!

Plastic has a variety of uses and that versatility is also recycling's kryptonite!

Conventional kerbside recycling is not performing as well as cities hoped for. The more contaminated the commingled plastics, the worse the quality and value of the plastics and the less that is recycled.

Well under half of the plastic dropped in kerbside recycling is actually recycled. Instead, most of it is incinerated for energy. Which releases harmful particulates, that health bodies around the world, like the CDC, regard as a threat to human respiratory health.

Final disposal, like incineration, landfill or chemical recycling, forces the accumulation of Carbon emission for replacement products over and over again!





What **really** happens when Derek throws it out

Kerbside recycling Mixes a variety of plastics and sometimes combines it with metals. All of which must be separated so commingled plastic sources don't contaminate one another.

Sorting plastics is done using float tests. These use a lot of water and crudely separates by density. It also needs shredding first! Making manual sorting an impossible task.

The more scale, the more the problems scale, the less plastic is recovered by weight. Meaning there's no guarantee Derek's water bottle will be fully recycled. Losing all that valuable recycled material. A missed opportunity to reach the city's Net Zero targets.

Manufacturing during socio-political uncertainty

In the Western world, most countries depend heavily on the manufacturing capabilities of other countries with unreliable, unstable relationships.

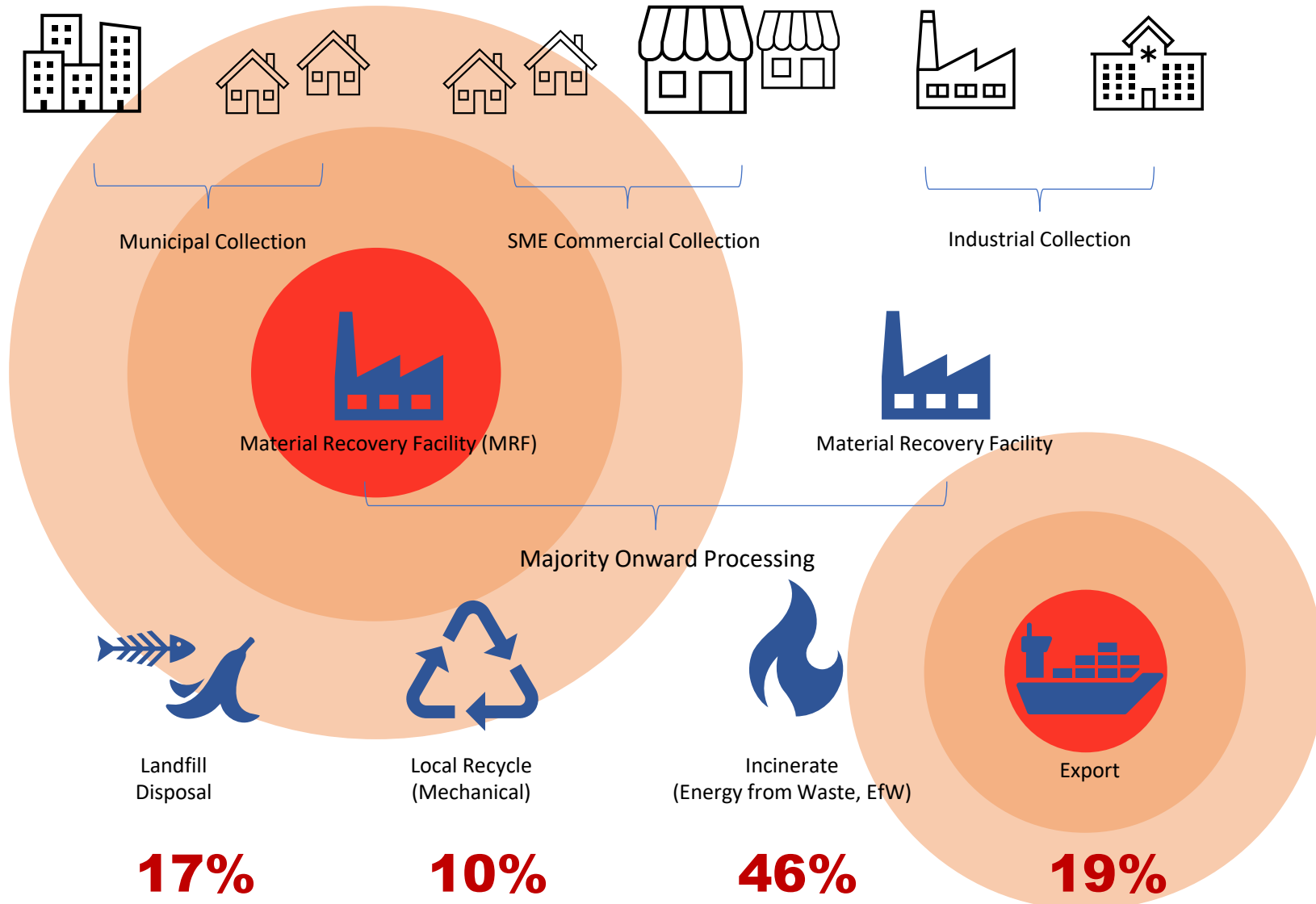
Distant manufacturing means significant Carbon is emitted in transit and a loss of manufacturing sovereignty. Threatening supplies of parts and leaving waste exports at the whim of other nations. Redirecting valuable waste material to unprepared, poorer countries. Losing it forever!

Unstable governments are now presenting a threat to the supply capability of the entire world. It's time to reclaim that capability and bring it back on-shore!

There is hope! Cities can build foundational capabilities allowing continuity of part production, through secondary markets for recycled plastics!




The How: Recapping Today's Waste Processing



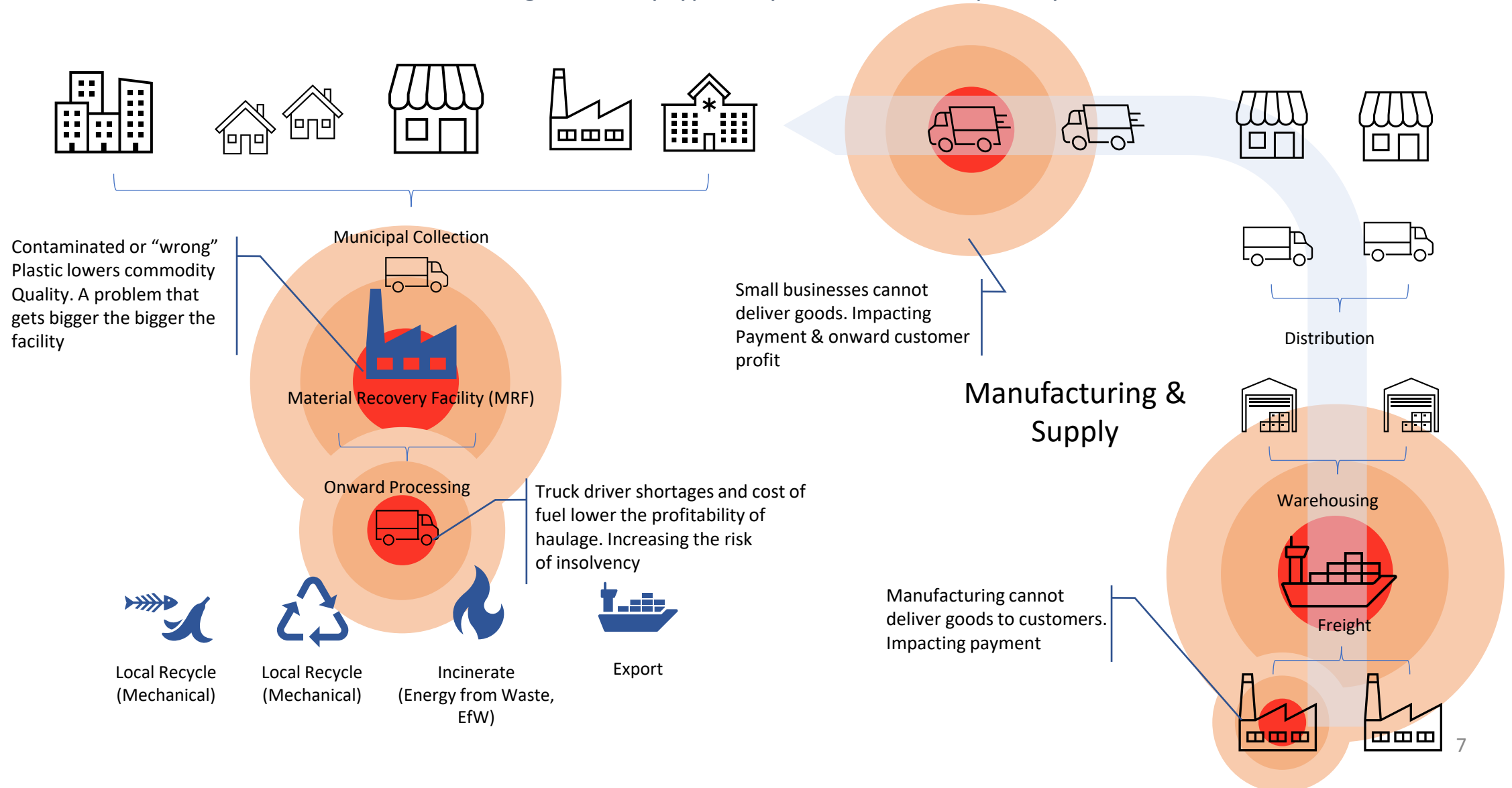
Long Supply Chains Lower Resilience & Emit More Carbon

The more moving parts in waste disposal, the higher the Carbon footprint, the larger the overhead and more things go wrong. Whether strikes, war or supply chain disruption, each is a barrier to city resilience. Preventing plastic waste being taken away and denies residents parts and products to fix housing, machines or for use as accessories.

 "Blast" Radius (systemic impact)

Not just Waste: Add Manufacturing = Combined Problems

To reach Net Zero, municipalities must reduce consumption of natural resources, shorten supply chains AND minimise what is not reclaimed. This also delivers resilience against many types of systemic failure. Especially in uncertain environments.





Automedi is the solution unifying cradle-to-cradle circular economies

Our turnkey circular economy platform captures and remakes more plastic waste and turns it into products, without needing conventional waste disposal, logistics, freight or the heavy investment of large scale, high energy injection moulding machines.

We combine mechanical recycling “hubs” and 3D printing “spokes” to help municipalities become self-sufficient and more resilient. Allowing them to plan independently, achieve Carbon neutrality and tap into economic, job creating potential of circular economies. Transparently tracking and reporting performance.

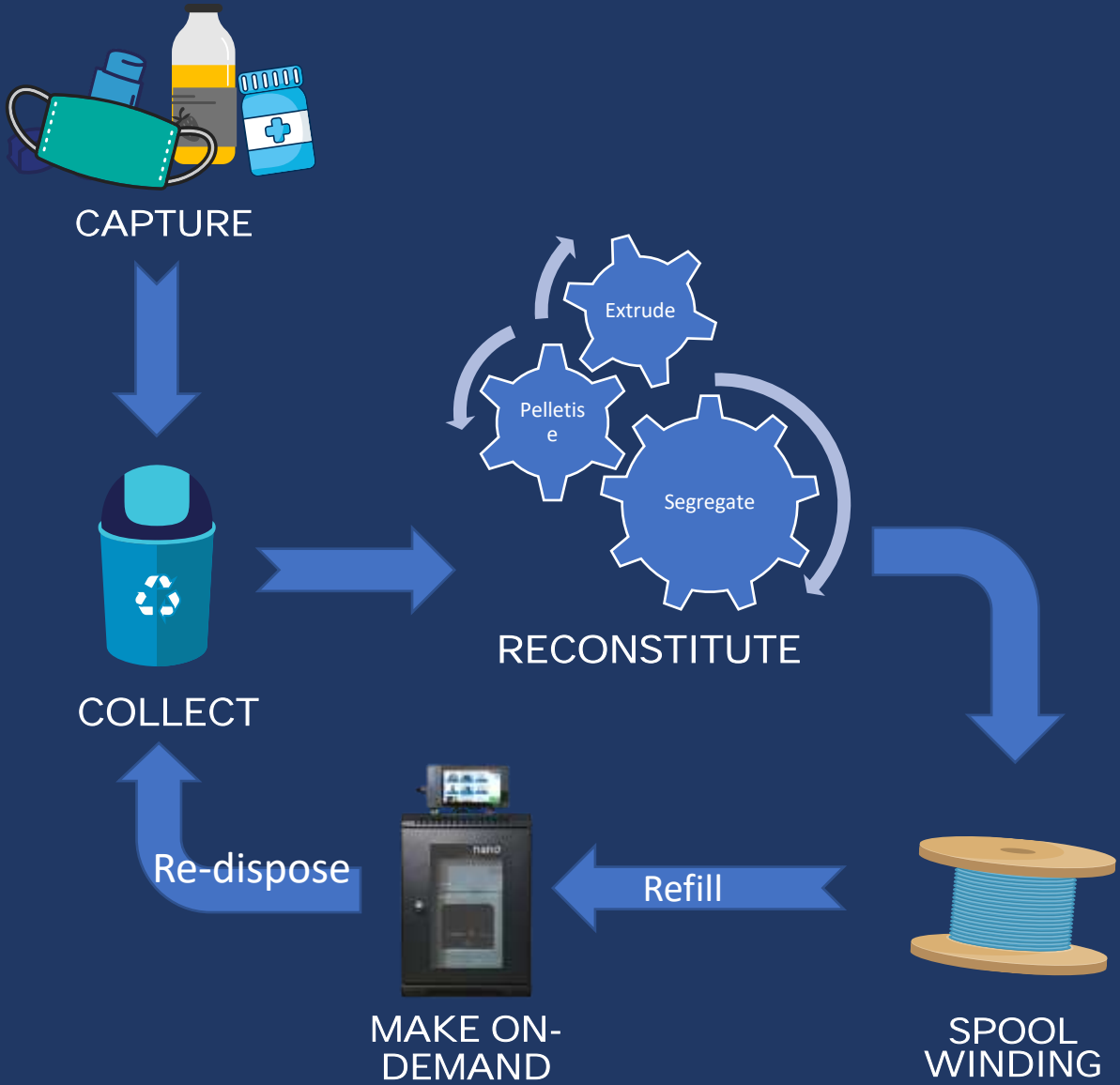
Local, Circular, Sustainable Manufacturing

Deploy and locate all of Automedi's platform components within 15 minutes of our recycling hub. Ensuring our emission savings do not simply reappear as greater transportation pollution.

Our services are locally operated, with a local workforce from each community. Helping municipalities become self-sufficient, operate manufacturing "outreach" and offer resilient alternatives to conventional manufacturing & supply by taking control of commodity supplies and cleaning up residential waste at the same time.



HOW AUTOMEDI WORKS



Plastic waste into product, Just-in-Time

Automedi is constantly optimising both **consumption** and **production** to balance cradle-to-cradle demand from end-users. Creating product sources from intermediate flakes for recyclers, through filament for additive manufacturing and end-client products and parts.

All with no minimum order quantities (MOQs), no over-consumption of natural resources, no virgin petroplastics.

Our platforms plugs in anywhere plastic waste is collected. Meaning the integration is seamless!

OUR PROPOSAL

Pilot Project Plans

Waste audit	week 1
Material analysis	week 2
Product selection & design	week 3
Infrastructure planning: Geography	week 2
Recruitment & Staff Training	week 6
Setup	week 4
Initial Operations	week 8
Mid-term Reporting	week 26
Final Operations	week 27
Dissemination	week 48
Final-report	week 52

Target Operating Model

Aims for 2030

Faster Systemic Protection

- Fast deployment across community services
- Augment existing products
- Rapid blueprint fleet distribution across service
- Customisable, part templates care equipment
- Eradicate care product shortages

Example: "14,000 nursing professionals from across the UK confirm that:

- Almost a third of nursing staff treating Covid-19 positive patients not on ventilators report an immediate lack of face and eye protection;
 - Only half of nursing staff believe they have enough alcohol hand rub;
 - One in ten nurses are relying on face or eye protection they have bought or homemade."
- Nursing Times, April 2020

Contingent "Digital Twin" supply chain

- Reduce shortage impacts
- Reduction in cross-contamination risks
- Product safety accessories
- Faster, safer agency & bank onboarding

"This crisis is taking the lives of nursing staff, and their colleagues feel they've been left exposed. All decision makers involved here need to get an urgent grip on the situation. Nursing staff just want to do their jobs – they must be given protection in order to do so."

- Nursing Times, April 2020



Cost-effective Contingent Alternatives

- Reduce & Cap contingent supply costs
- Raw material to Recycling workflow
- Cost-effective recognised alternatives
- Lower energy costs
- Eradicate care product shortages
- Rebalance cleaning energy of reusable tools

Example: "About 47% of NHS trusts—which provide secondary care to patients who've been referred there by a GP—were in the red in 2018/19. The figure was 67% just among acute hospital trusts—which make up the bulk of NHS trusts across England."

- Full Fact, July 2019

17 Sustainable Development Aims

- No oil-based plastics
- Lactic Acid from waste plant products
- Eradicate delivery emissions
- Circular economics
- Bioplastics commodity market
- Local enterprise, Job creation & "Good Work" (Taylor Review)
- Reduce health inequality

"During my nearly five years as director-general of WHO, high-level policymakers have increasingly recognized that health is central to sustainable development."

- Dr Gro Harlem Brundtland, World Health Organisation
Former Director General

Sustainable, Resilient, Easy to Use SmartCity Circularity Platform

Automedi's ambitious plan creates a new, future-proofed, sustainable, resilient operating model simultaneously solving immediate, imminent and future socio-economic, health and climate challenges. Ensuring an always-available supply of commodity products and accessories that ensure cities continue to function and build out their manufacturing sovereignty.

Tapping into the Internet of sustainable manufacturing

Leading cities using Circularity-as-a-Service (CaaS) bridge communities and large manufacturing businesses. “Teleporting” products across economies by making it from waste plastics.

- Delivering & reporting net zero obligations
- Secondary outreach manufacturing markets
- Dominate competition in “Right to Repair”
- Close the door to counterfeiters



Added Value Objectives: helping cities create better economies



Waste collection subscriptions

100 commercial customers per cluster, per month, is enough to break even.



Additional Subscriptions

Extra manufacturing outreach subscriptions to increase local circularity and delivery licensed parts from manufacturers



Reclaimer Subscriptions

Larger district Reclaimer subscriptions to Care Groups & Local Government



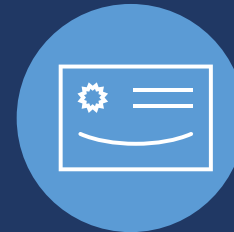
Licensing & Franchise Networks

District Reclaimer subscriptions to Care Groups & Local Authorities. Stimulating job creation.



Sales & Direct to Consumer

Products sold via our website, ecommerce or marketplaces, and fulfilled via distribution and supply agreements. So cities earn a fee.



Agent & Certification programme

Cross-sell to franchise and licensees to maintain franchise rights, through business growth hubs and economic development agencies.



Recycled Plastic Feedstock

Provide other local manufacturers with a supply of mechanically recycled plastic flakes from city waste



Alternative Virgin Material

Supply the petrochemical industry with sources of monomer gas & Naphtha alternative for plastic production as a crude oil substitute

HOW DO PRODUCTS COMPARE?

BENEFITS

- Commerce Subscriptions
- **80%** lower costs
- **£70-£3,000/tonne** disposal saving
- **92%** Lifecycle **CO₂**.

Products Made from waste through our process, outperforms combined plastic recycling and manufacture in cash, carbon and plastic recovery.

Our platform offers a user-friendly way to deliver unlimited product lines. without having to re create moulds and forms for manufacturing.



1" Polypropylene Socket Fixture

✘ Conventional

Cost: £7.20 (inc VAT)
Embedded CO₂: 113g
Disposal: 30g CO₂

✔ Automedi

Cost: £0.20
Embedded CO₂: 3g
Disposal: 10g CO₂

Facilities & Electrical



Mask Comfort (e.g. ear savers)



Catering Storage & Clips



Washers & Seals



FAST, COST EFFECTIVE SUPPLIES

Get commodity products any time you need them!



✘ Classical Buy

Cost: £3.18
(inc delivery & VAT)
Embodied CO₂: 61g
Disposal CO₂: 17g

✔ via Automedi

Cost: £0.14
(delivery not required)
Embodied CO₂: 3g
Disposal CO₂: 2g

Products in as little as
7 minutes

"Automedi helped strengthen working relationships with other healthcare professionals, making Alphabet Pharmacy a hub of primary care"

★★★★★

Alpa Ghelani,
Superintendent Pharmacist & Owner,
Alphabet Pharmacy



THE ART OF BALANCE



334

Trees Planted minimum
(per cluster, per year)



2

Territorial Studies



4.75 kg

Net Carbon Saving per kg
of plastic



26.14 miles/kg

Equivalent Saved



4 COMPLETED

Trials



£33,396

Annual Profit per cluster
from £124,000 revenue



4

Awards



8

Portfolio Offsets
(its not just trees)



Co-Branding

Community Awareness

- “Scan-to-collect”
- Automatic level sensors
- Great marketing & PR
- All instructions on the bins
- Local support number

For this proposal, our bins provide all the information needed right out of the box. They tell us when they need emptying. If communities need help, simply scan and tap for a new bin, their own carbon reports or ask for support!

Putting your name and corporate identity on the bins is ideal for memorable press-releases and signposting.

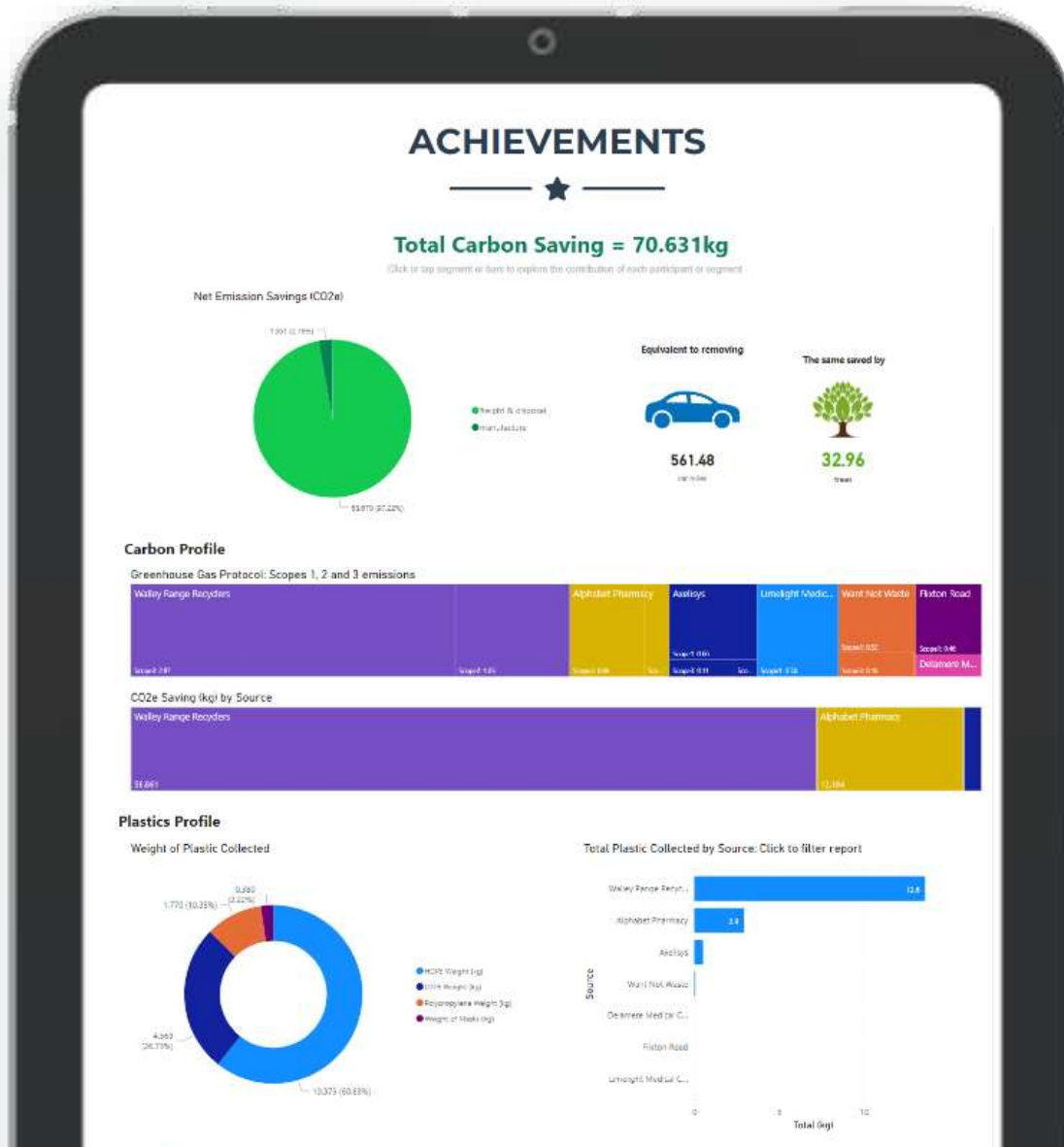
Transparent Tracking

No Exporting or Incineration

- Local processing
- Low distance travel
- No incineration
- No landfill

Plastics will be processed very close to their collection source. Whether that is in the utility rooms of high-rise residential buildings, or in local workshops. It captures and turns plastic products for that community without sending waste far away.

All suitable plastics are smart tracked. Giving transparent confidence the city is doing what it said it would. Our dashboard presents an easy to use Carbon report with emission savings in Carbon Dioxide Equivalent (CO2e) appearing in near real-time! Ideal to support existing sustainability efforts.



Mini Case Study – Full Report in Case Study folder

UK NATIONAL HEALTH SERVICE & PHARMACIES

#REMASKED PILOT RESULTS

PLASTIC RESULTS



£197.85

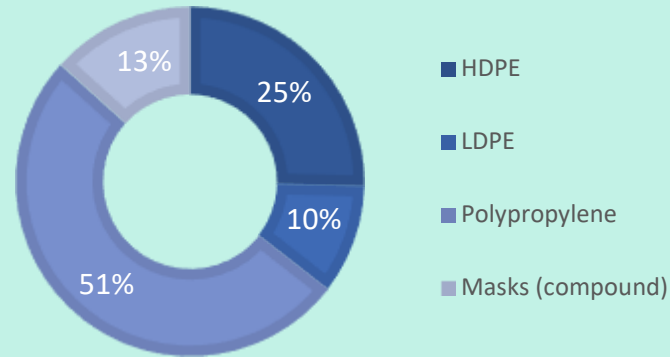
Total Value Add
equivalent £72.26/kg



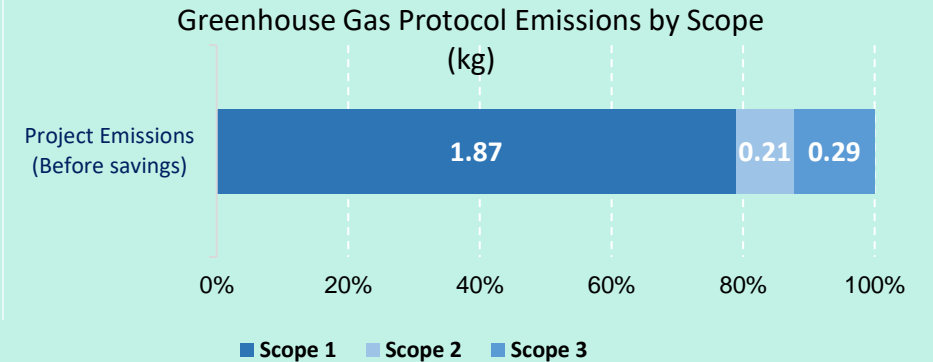
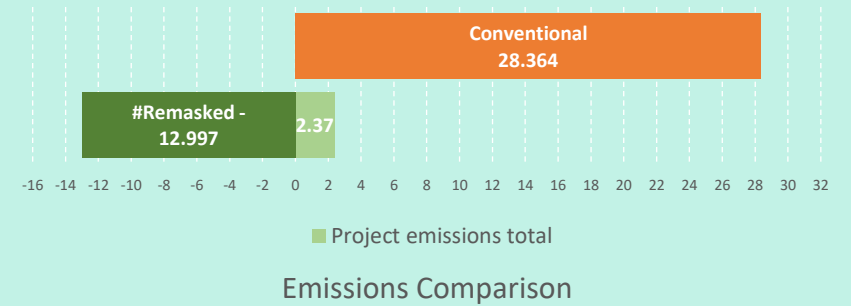
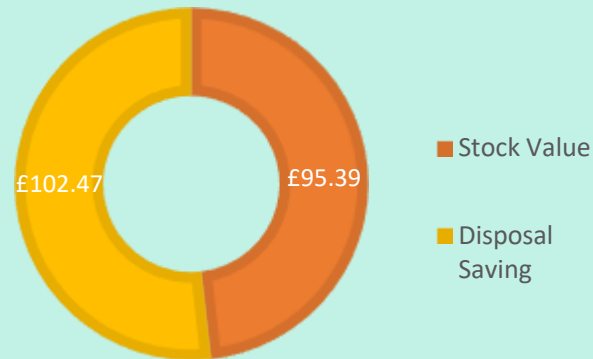
10.627 kg

Net Carbon Saving

Material Type

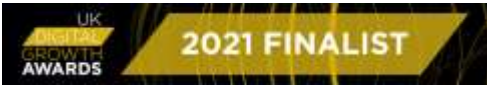


Gross Value Add





Awards & Accelerators



Accelerators



Grant Funding



Testimonials



Extremely innovative and sustainable product with an important need that could save the NHS a huge amount of money and become greener.

*NIA Accelerator, Evaluation Panel
NHSX, United Kingdom*



We selected Automedi's product due to the potential it has in supporting the NHS and their net zero ambitions.

*Victoria Vaines, programme manager
Yorkshire and Humber Academic
Health Science Network, United
Kingdom*



Really helpful company, and I love that things are recycled and 3D printed in small batches as required, cutting out so much waste. Excellent service, I definitely recommend.

*Hazel Mayow
Customer Buyer*



Automedi helped strengthen working relationships with other healthcare professionals, making Alphabet Pharmacy a hub of primary care.

*Superintendent Pharmacist + Owner
Alphabet Pharmacy, Manchester,
United Kingdom*



Scaling up through local pharmacies is a great idea. They already have the local footprint and can respond rapidly to local demand.

*NIA Accelerator, Evaluation Panel
NHSX, United Kingdom*



We think its a really great product that could work well in the NHS!

*Nicole Fletcher
NHS England & NHS Improvement*



Global Ambition, Starts & Multiplies

International leading cities start with yours. Developing closer public-private commercial networks of customers to scale everywhere and rebalance the relationship with civic needs.

US and EU expansion is just around the corner. Additional capital allows robust operation in those markets. Leapfrogging to other jurisdictions and sectors.

Is your city the hero the world needs?

Be Social:

 WeAreAutomedi

 AutomediU

 Automedi

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E: hello@automedi.co.uk



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