

Nasdaq: ADUR

# Corporate Presentation January 2025

adurocleantech.com

The Between Chemistry.

## Forward looking statements

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We develop **chemical** technology platforms that **transform** low-value materials into higher-value resources with the aim of unlocking significant environmental and economic benefit



## Multiple potential market applications

STAGE APPLICATION

TOTAL POTENTIAL ADDRESSABLE MARKETS

#### **PILOT STAGE**





#### Advanced chemical recycling of plastic waste<sub>(1)</sub>

Converting plastic waste streams into valuable resources including chemical precursors & fuels





#### Partial upgrading of heavy crude oils(2)

Partial upgrading of heavy crude & asphaltene to lighter crude products



#### ADVANCED RESEARCH





## Converting renewable oils to sustainable fuels and chemicals<sub>(3)</sub>

Chemical conversion of renewable oils to renewable diesel, sustainable aviation fuel and renewable platform chemicals.

**USD \$ 121B** 

#### **FUTURE APPLICATIONS**





#### Research and development

A flexible technology platform that has applications in additional market segments like rubber tires, by tuning the chemistry and controlling the interplay of processing parameters



<sup>(2)</sup> https://www.iea.org/reports/oil-market-report-february-2022



<sup>(3)</sup> https://www.globenewswire.com/news-release/2022/01/19/2369236/0/en/Biofuels-Market-Size-to-Surpass-US-201-21-Billion-by-2030

## A next-generation technology platform

# Turning low-value hydrocarbons into higher-value products



#### Hydrochemolytic™ Technology

- Ten years of research and development
- One technology platform, multiple applications
- Transforms difficult, low-value materials into valuable resources
- Crucial role in advancing the circular economy
- Operates at lower temperatures
- Higher conversion yields

#### **Benefits**

- High tolerance streams
- Lower temperatures
- Higher and quality yield
- Highly saturated product
- No molecular hydrogen
- Minimum post-processing

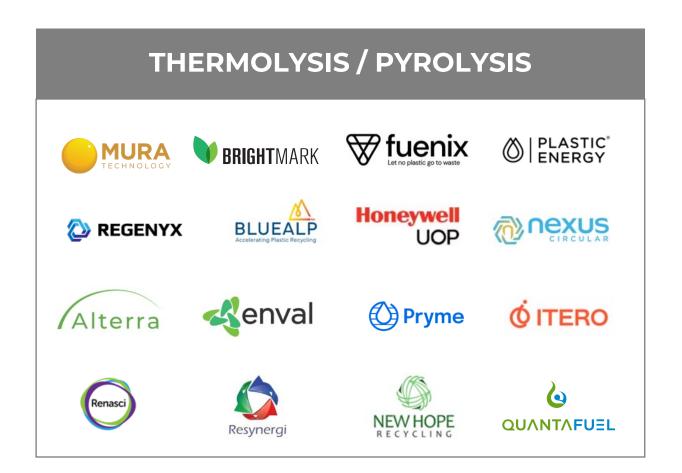
#### **Strong Patent Strategy**

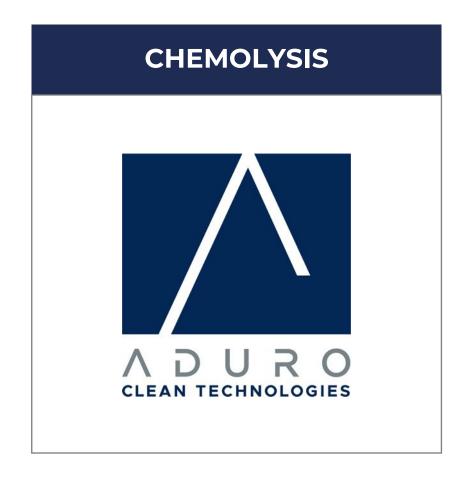
- Strong patent strategy
- 7 patents issued
- 2 patent pending
- More in development



## Hydrochemolytic™ Technology (HCT)

A new chemical recycling technology, a better approach to converting diverse feedstocks





At least 70 other companies and university-affiliated institutes globally are investigating the space, see Closed Loop Partners and Nova Institute for more information. (4) https://www.closedlooppartners.com/wp-content/uploads/2021/11/CLP\_Molecular-Recycling-Directory-2021.pdf



# Advanced Chemical Recycling A niche role for Hydrochemolytic™ Technology



Diverse recycling methods are needed to address global plastic waste problem. The chemical recycling services market is projected to increase from USD\$ 15.7B in 2024 to USD\$ 149B by 2034. (5)



## Global Waste Management Overview Significant opportunity for chemical recycling

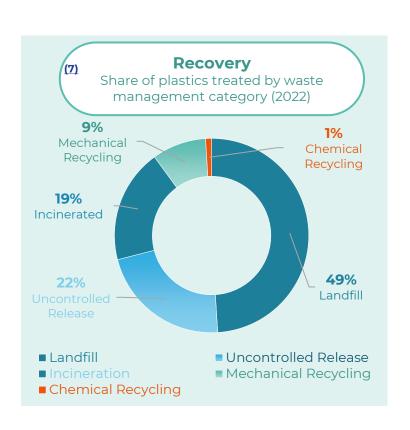
Global plastics production was **400.3 Mt** per annum in 2022. Recycling /recovery rates are only **10%**, 49% of plastics end up in landfill, a further 22% is uncontrolled released into the environment, and 19% is incinerated or gasified for energy generation.



## **The Opportunity**

This is valuable carbon available for the circular plastic economy.

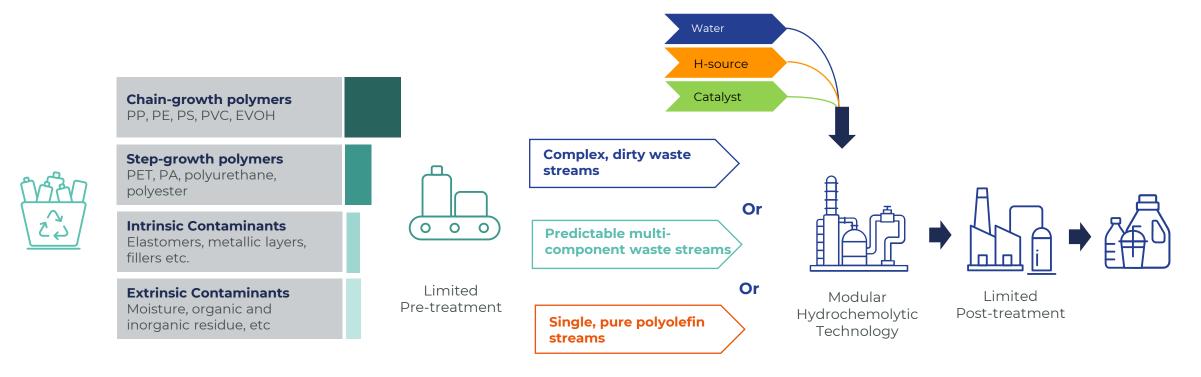
Innovation in mechanical & chemical recycling is needed for a future state of 75% carbon recovery.



<sup>(6)</sup> https://plasticseurope.org/wp-content/uploads/2023/10/Plasticsthefastfacts2023-1.pdf

## Hydrochemolytic™ Technology (HCT) and plastic circularity

A novel, game-changing approach in chemical recycling that can be configured based on the dynamic characteristics of feedstocks with better potential to transform more plastic waste into valuable materials, more sustainably and efficiently than other approaches and technologies today.



## Hydrochemolytic<sup>™</sup> Technology

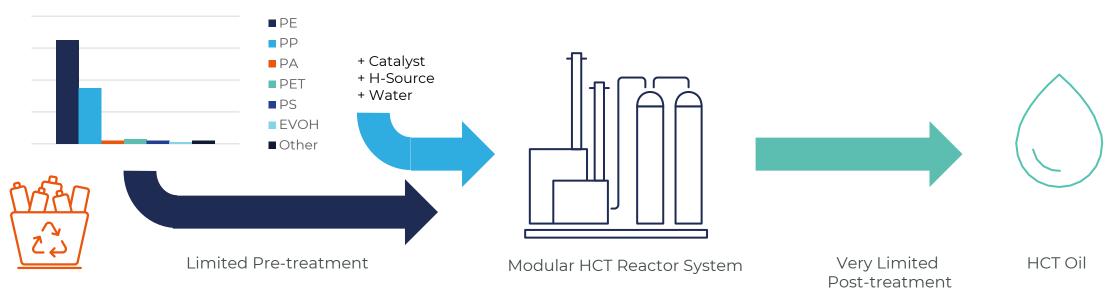
Designed for modularity allowing more business options

Hydrochemolytic<sup>™</sup> Technology (HCT) is highly configurable to the requirements of a wide range of waste plastic feedstocks.



## Simple clean streams from post industrial sources

Waste Plastic Composition — Representative Sample



Note: Waste composition is largely PE & PE with **small** amounts of intrinsic and extrinsic contaminating materials.



## Hydrochemolytic<sup>™</sup> Technology

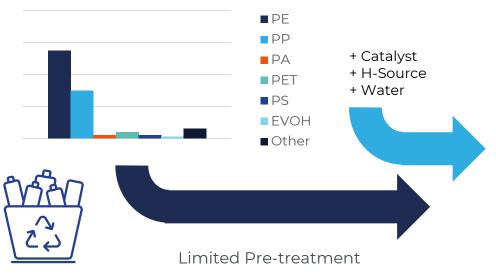
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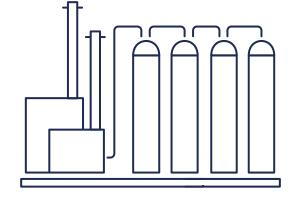


## Dirty complex waste streams from post consumer sources

#### Waste Plastic Composition — Representative Sample



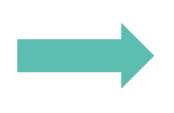
Note: Waste composition is largely PE & PE with larger amounts of intrinsic and extrinsic contaminating materials.



Modular HCT Reactor System

Modular configuration

To address changes in feedstock composition







HCT Oil



## 2025 Strategic goals

Three transformational business goals to commercialization

#### **Technology Development**

- Delivery and commission of NGP Pilot Plant by early Q3
- Initiate detailed design of the scaled-up Demonstration Plant

2

#### **Commercial Program**

 Accelerate and expand customer and industry partners' engagement both for plastic waste recycling and bitumen upgrading.



#### **Intellectual Property**

- Continue to build on the Company's strong patent and Intellectual Property portfolio.
- Refinement of current and new chemical process technologies to further enhance, optimize and implement commercial solutions

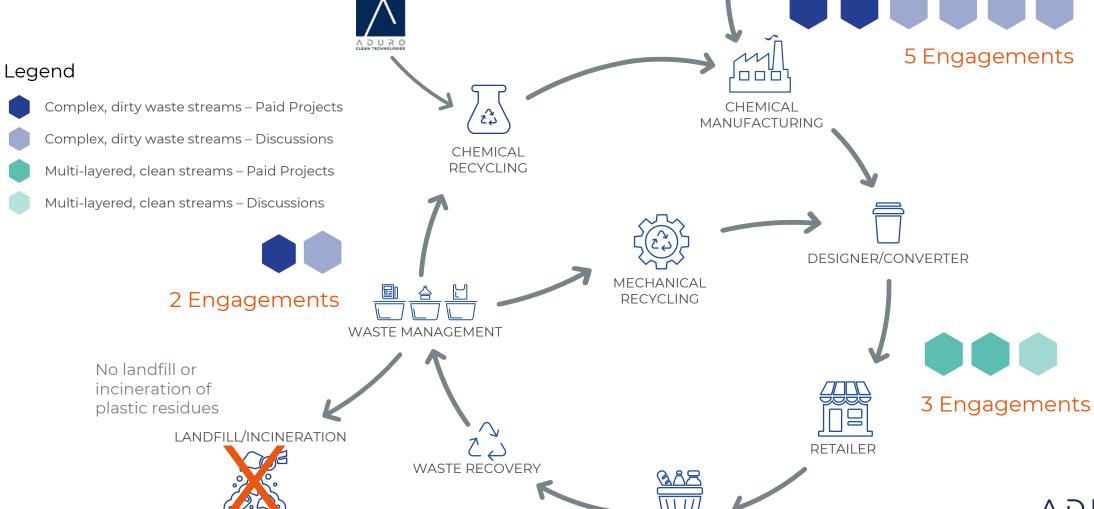
Road to commercialization



# Aduro Engages with Prospective Partners Along the Value Cycle



**CONSUMER** 



## Customer Engagement Program (CEP)

Customer Engagement Program
From technology evaluation to
technology collaborations

Stage-gate engagement to evaluate, refine, and commercialize the technology with early adopters.

Value-adding and revenue-generating process to advance and de-risk the commercialization program.

Engage organizations that are in search for alternative technologies to pyrolysis.

Technology Evaluation Collaboration Commercialization

Technology Evaluation

We spearhead our technology and provid mainly data and results on general and specific feedstock to our potential partners and customers

- Collaboration
  Together with our partners, we continue to develop, improve, and stabilize pilot-stage and pre-commercial settings, often tailoring solutions to meet the specific needs of each potential partner
- Commercialization
  Continue the journey with first adopters to establish a commercial program

Goal: Convert two clients from Technology Evaluation to Technology Collaboration



## Revenue opportunities at every stage

During scale-up from simple to complex, Aduro will engage customer with a modular design approach to meet their specific waste plastic management needs.

HCT can be configured for different feedstocks and designed to provide different production solutions

Targeting simple small applications that can generate early-stage revenue

Moving over time to more complex applications

Starting with Technology Evaluations

**\$\$\$** Complex, dirty waste streams Large complex and dirty waste streams Conversion of large complex and dirty waste streams, like domestic sorting residue, mixed packaging films, and paper recycling rejects. **Material Complexity** Multi-layered, clean streams Predictable multi-component waste streams Conversion of well-defined and predictable multicomponent waste streams with separation challenges, like multi-layer films. Simple, clean streams Single, pure polyolefin streams Conversion of single, pure polyolefin streams that are hard to recycle mechanically for non-chemical reasons like logistics or safety. HCT will be straightforward and predictable. 2023 2025 2026 2027 2024



## Customer Engagement Program (CEP)

Launched CEP to facilitate early-stage engagement with prospective customers.

#### **Technology Evaluation.**

November 1, 2022 | Plastic Upcycling



March 20, 2020 | Bitumen Upgrading



October 11, 2023 | Plastic Upcycling



November 2024 | Plastic Upcycling



November 30, 2023 | Plastic Upcycling



March 2024 | Plastic Upcycling



#### **Paying Customers**

Paid engagements starting technology evaluation. Stage-gated approach to advance toward collaboration.

## **Technology Collaboration**

July 30, 2024 | Plastic Upcycling



## **Paying Customers**

**5** Petrochemical

Building materials

1 Food packaging



## Customer Engagement Program (CEP)

## **Technology Collaboration**



#### **Technology Collaboration Agreement**

Together with our potential partners, we continue to develop, improve, and stabilize pilot-stage and precommercial settings, often tailoring solutions to meet the specific needs of each potential partner.

The CEP encourages customers to engage with small scopes, then expand the scopes before moving into a collaboration phase.

#### **TotalEnergies timeline**

October 11, 2023

Aduro Clean Technologies Welcomes New Participants to its Customer Engagement Program

November 30, 2023

Aduro Clean Technologies Expands Technology Evaluation Scope with Leading Petrochemical Company

July 30, 2024

Aduro Clean Technologies Enters New Phase of Collaboration with TotalEnergies



## Sites | Technology Demonstration + Research & Developemt

## Office & Laboratory

#### **London I Ontario**























## Capital structure

STOCK LISTING	NASDAQ: <b>ADUR</b>   CSE: <b>ACT</b>   FSE: <b>9D50</b>
SHARES OUTSTANDING (Issued & Outstanding / Fully Diluted)* (Nov 30, 2024)	28,337,984 / 32,944,135
INSIDER OWNERSHIP	39 %
WARRANTS / OPTIONS OUTSTANDING:	1,394,184 / 3,211,966 *
MARKET CAPITALIZATION ** (Nov 30, 2024)	CAD <b>\$228 M</b> (USD <b>\$159 M</b> )



<sup>\*</sup> Warrants are exercisable at an average price of CAD **\$3.6722** (range CAD \$1.625-\$6.545), with 16% held by Insiders and Options are exercisable at an average price of CAD **\$3.6285** (range CAD \$2.1125-\$6.50), with 49% held by Insiders.

<sup>\*\*</sup> Market capitalization is calculated based on total shares issued and outstanding on November 30, 2024, multiplied by the closing price on November 29, 2024, of CAD \$8.06.

## Management Team



**Birendra Adhikari** Head of Research & Development



**Eric Appelman**Chief Revenue Officer



**Mena Beshay**Chief Financial Officer



**Abe Dyck**Head of Corporate
Development / Investor
Relations



**Arturo Gomez**Vice President Engineering



**Anil Jhawar** Chief Scientist



**Stefanie Steenhuis** Head of Brand & Marketing



Marcus Trygstad Co-Founder & Principal Scientist



Ofer Vicus Co-Founder & Chief Executive Officer



## **Board of Directors**



Marie Grönborg
Director



Peter Kampian
Director



James E. Scott
Director



Marcus Trygstad Co-Founder & Principal Scientist



**Ofer Vicus**Co-Founder &
Chief Executive Officer



THANK YOU!

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