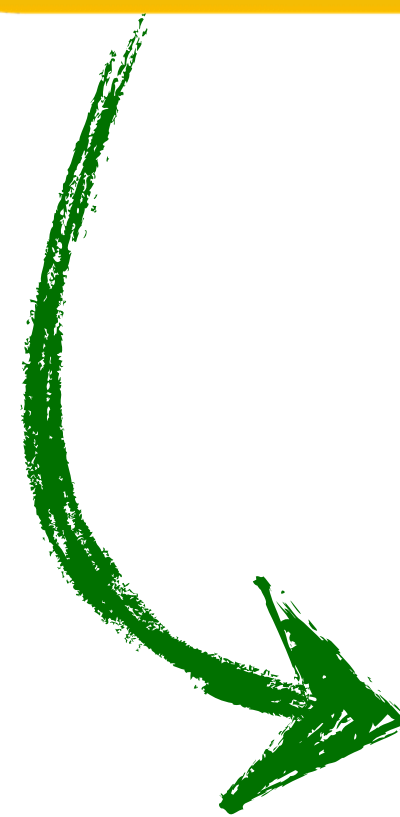


Game-changer Technologies for Plastic Circularity

End-of-Life
Polymer Waste




Refinery &
Petchem



Circular
Plastics



Sustainable
Chemicals & Fuels

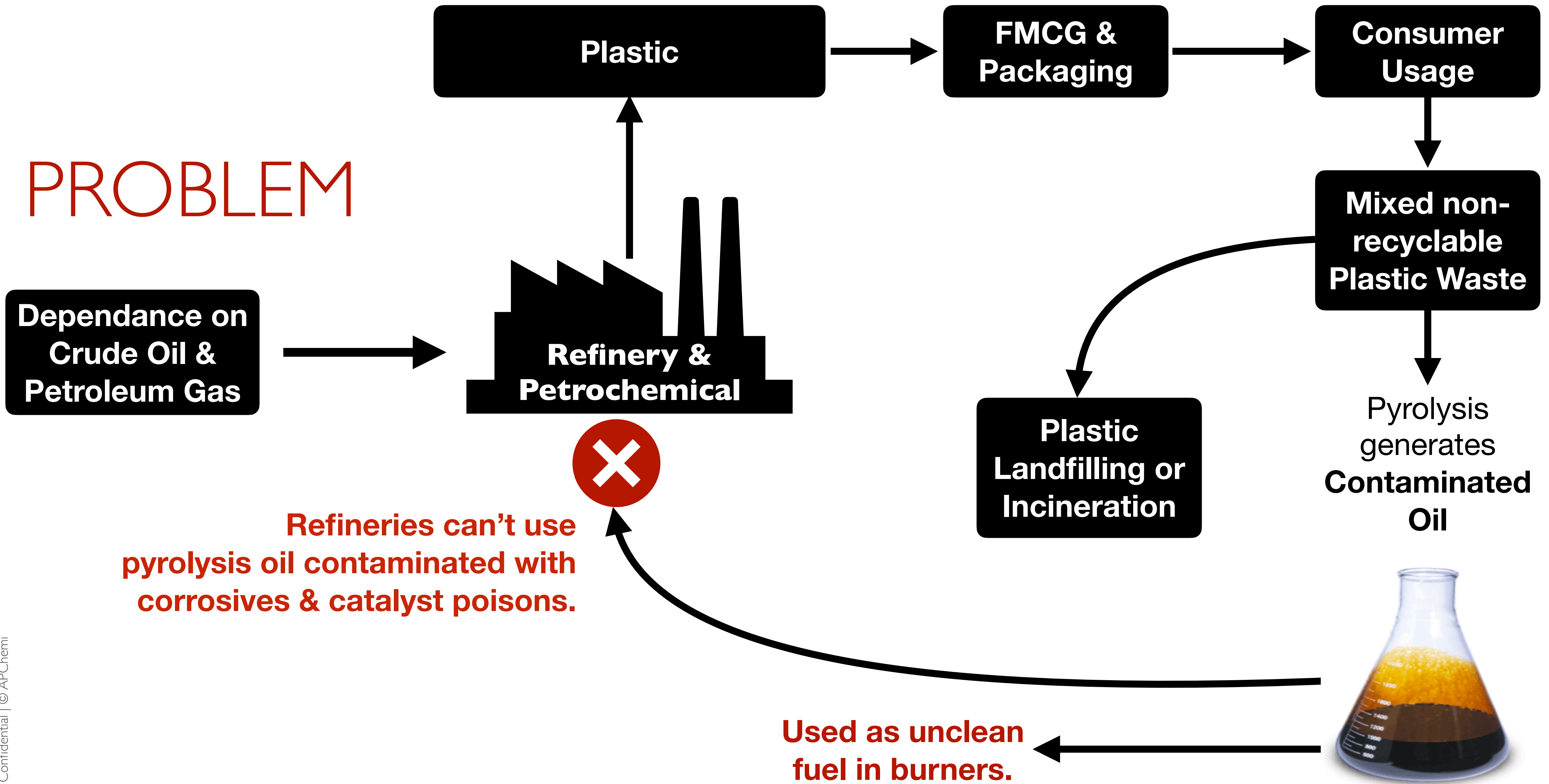


APChem Vision

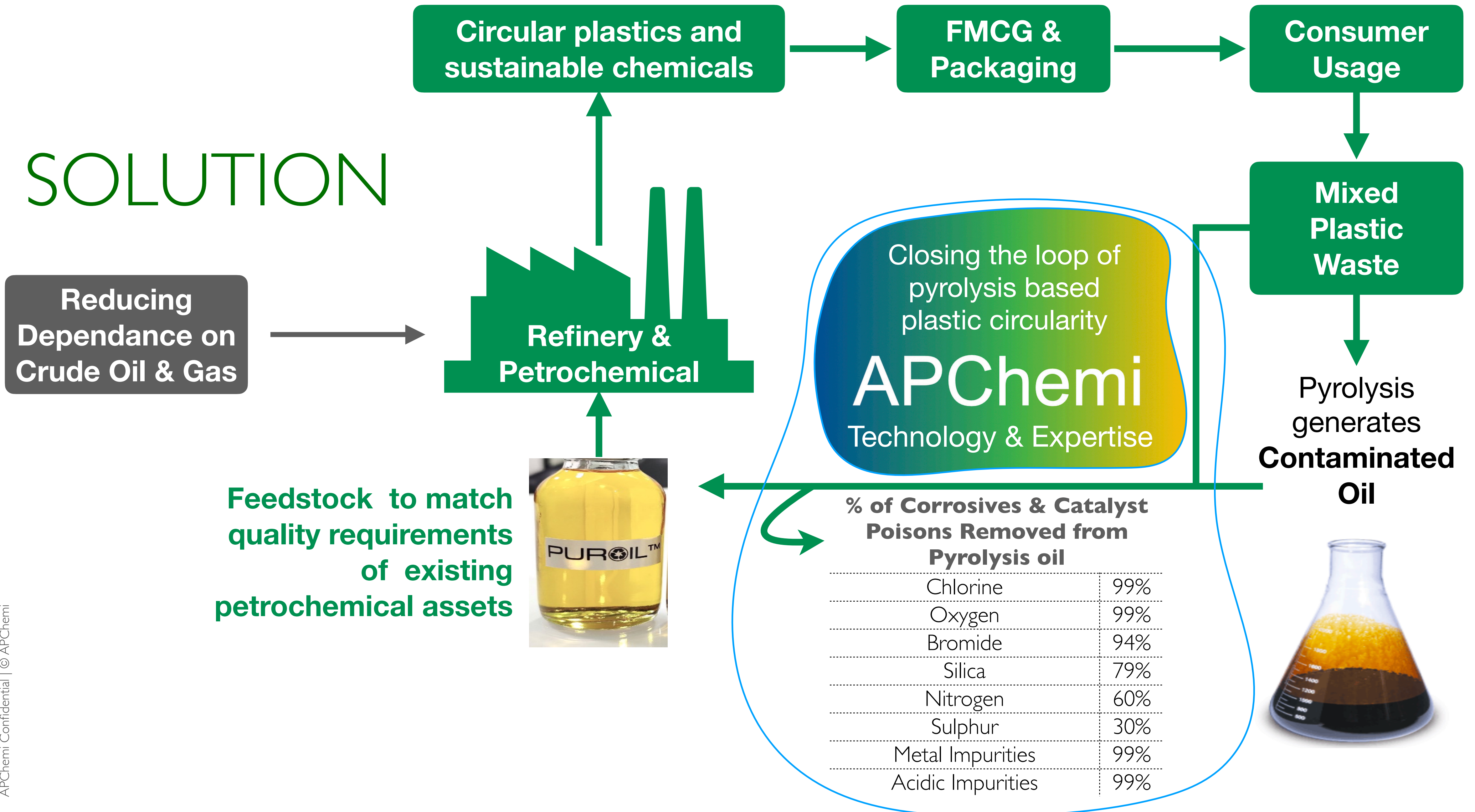
Collaborate and unlock the global production of biofuels, circular plastics & sustainable chemicals through pyrolysis and oil-purification technologies.



PROBLEM



SOLUTION



Closing the loop of pyrolysis based plastic circularity
APChem
 Technology & Expertise

% of Corrosives & Catalyst Poisons Removed from Pyrolysis oil

| | |
|-------------------|-----|
| Chlorine | 99% |
| Oxygen | 99% |
| Bromide | 94% |
| Silica | 79% |
| Nitrogen | 60% |
| Sulphur | 30% |
| Metal Impurities | 99% |
| Acidic Impurities | 99% |

Feedstock to match quality requirements of existing petrochemical assets



Advantages of Pyrolysis oil Purification Technology

- ✓ Highly scalable - can be deployed at small pyrolysis plant or a large petrochemical complex
- ✓ Highly Energy-efficient
- ✓ Drastically reduces carbon footprint for removal of Cl, O, N, S, Br
- ✓ Reduces Organic as well as Inorganic Chlorine
- ✓ TRL7 - Functional Demonstration Prototype
- ✓ Patented (1 Granted, 6 under examination)

Case Study on Pyrolysis oil Purification Technology

- ✓ Feedstock: 96.5% Polyolefins + 3.5% PVDC
- ✓ Process: Pyrolysis followed by oil purification
- ✓ Chloride content in the purified pyrolysis oil: 73ppm
 - ✓ Organic chloride 57ppm
 - ✓ Inorganic chloride 16ppm
- ✓ Chlorine content of this purified pyrolysis oil is further be reduced using adsorbents.

APChemi

TRACTION

PORTFOLIO
OF 12 PATENTS



1 Granted patent in India and South Africa & Filed in USA, Canada, UK, EU, Singapore, Indonesia, Malaysia

6 Awaiting examination

2 Provisional Patents

3 in Drafting

COLLABORATIONS



TECHNIP ENERGIES



SUPPORTING ECOSYSTEMS:



Shell E4

startupindia



Start-Up Award



PLUGANDPLAY



ALLIANCE TO END PLASTIC WASTE

MAGIC MALAYSIAN GLOBAL INNOVATION AND CREATIVITY CENTRE



ACT Grants

CLIENTS



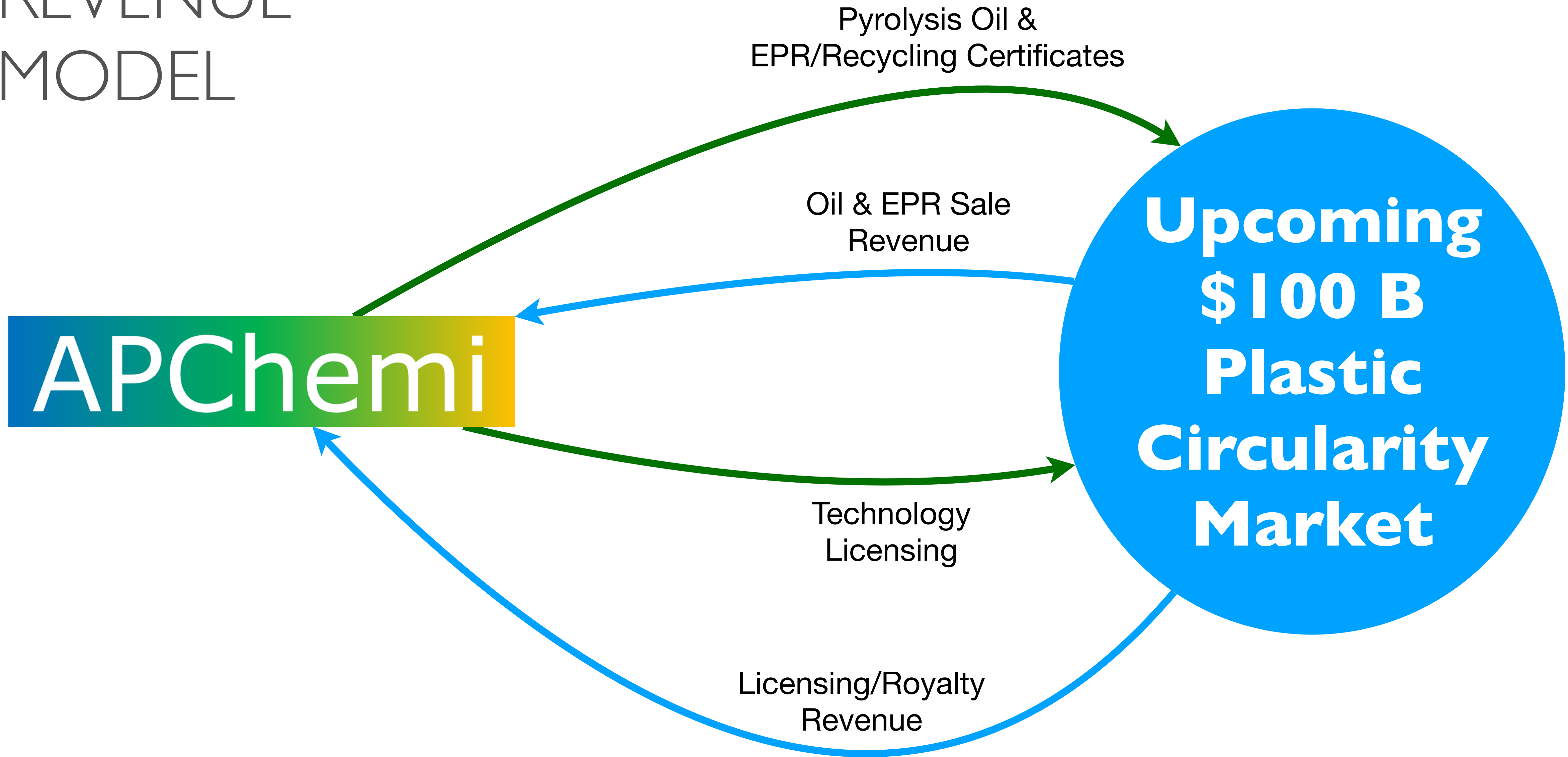
TRACTION

Samples of purified pyrolysis oil **approved by the 4 global petrochemical companies** for downstream production of circular plastics and sustainable chemicals.

LOIs can be shared across an NDA.









REVENUE MODEL



**Upcoming
\$100 B
Plastic
Circularity
Market**

APChem

APChemi Competition & Barrier to Entry

| | Patents | State Pollution Control Board Recognised R&D | Oil Purification | ASME Compliance |
|--|-----------------------|--|------------------|-----------------|
|  | 12 and growing | Yes | Yes | Yes |
|  | 1 and stagnant | No | No | No |
|   | Zero | No | No | No |
|  | Zero | No | No | No |
|  | Zero | No | No | No |

NOVELTY - ABILITY TO PROCESS CONTAMINATED PYOIL

| | Removal of Chlorine and Bromine Impurities from MSW Plastic Pyrolysis Oil | Removal Oxygen and Nitrogen Impurities MSW Plastic Pyrolysis Oil | Processing cost |
|-------------------------------------|---|---|---|
| APChem PUREMAX Technology | Yes, removes upto 99% of Cl and Br impurities | Yes, removes upto 95% of O and N impurities | Lowest |
| Distillation | No | No | Higher |
| Adsorbents | Not viable until Cl content is <200ppm | Only Oxygen (not viable until O content is <1000ppm), Not possible for Nitrogen | High |
| Hydrotreating | No Not usable unless Cl is < 5ppm and Br is <5ppm | No Not usable unless O is < 1500ppm and N is <500ppm | NA until certain purity of pupil is reached |

APChemi MOST CAPABLE TEAM IN THE DOMAIN

Suhas Dixit
CEO



12yrs experience
of developing over 47
pyrolysis plants
Serial entrepreneur,
Inventor of 12 patents

Adam Hillier
Advisor



Senior Petrochemical
Professional
Ex-CTO British Gas
Ex-VP Technology Shell

Mohan Kulkarni
IP Advisor
Ex-Senior Scientist, NCL

Vijay Vader
**Engineering
Management**



40yrs engineering experience in
petrochemicals,
Ex-VP in Reliance - Bechtel,
Headed projects in L&T

Nandkumar
Dhekne
Advisor



Ex-CEO of GE India and ex-
VP-Asia of Ashland



Prof. Shyam R. Asolekar
Subject matter expert environmental compliance
Core Faculty Professor - IIT Bombay

Aruna CN
COO



15yrs experience

15 years of experience in
operations including 10 years in
Tesco UK

Rakesh Saraf
Advisor



Business Development

20 years experience in
petrochemical marketing.

Team of:

- PhD Chemical Engineer
- Process Design Engineers
- Mechanical Design Engineers
- Electrical and Instrumentation Engineers
- Health, Safety and Environment (HSE) Engineers
- Automation Engineers
- Installation and Commissioning Engineers
- Research and development engineering team
- Admin and project management