



Reliable - Innovative - Sustainable



MBA Polymers UK

Our Vision

Support a sustainable planet by eliminating plastic waste

Preventing the depletion of the Worlds natural resources



Who are MBA Polymers?

Global leaders in plastic recycling, offering innovative alternatives to virgin feed, with consistent high quality you can rely on.

In less than thirty years, our vision and commitment has taken us from a small California garage to a World Leading Recycling operation.

But our task isn't complete. Millions of tonnes of plastic is discarded each year. Wasted, buried and burned. MBA Polymers will work to ensure that every year, more and more of this valuable material is put to good use, supplying industries across the world.



Our Plastics Recycling Facilities

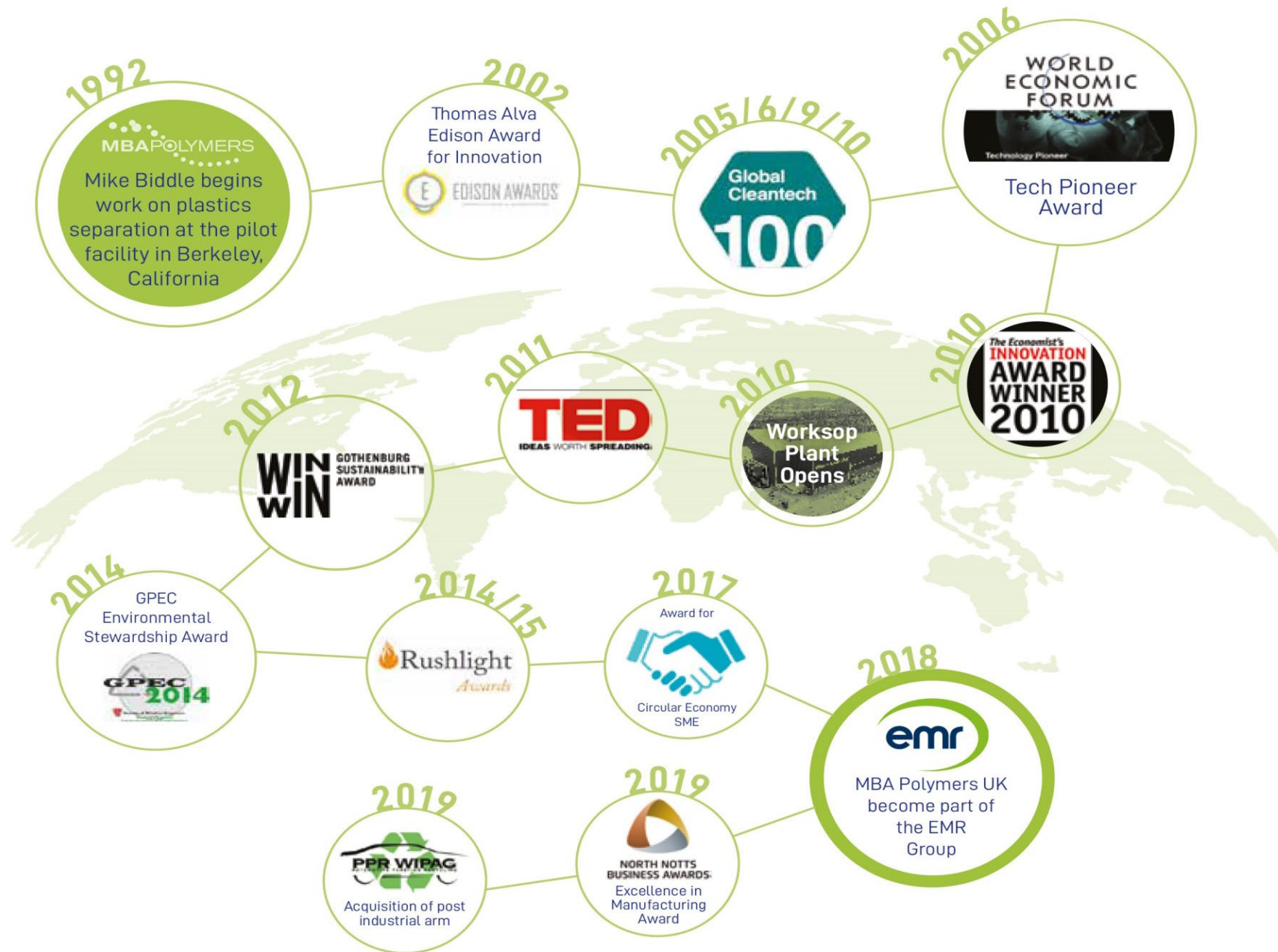
Every year our 13 acre production site in Worksop processes 40,000MT (with the potential to rise to 60,000MT) of Automotive Shredder Residue (ASR) and Waste Electrical and Electronic Equipment (WEEE).

In 2019, MBA UK expanded the business further, in the acquisition of a post industrial arm focused on processing post industrial plastics from the automotive industry including complex multi-layered parts and converting them back into high quality closed loop resins.

Enabling MBA UK to provide a total plastic waste management solution to the automotive and injection moulding sector.



Track record of recognition and growth

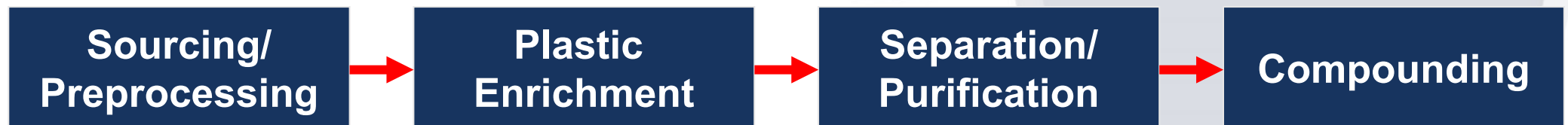
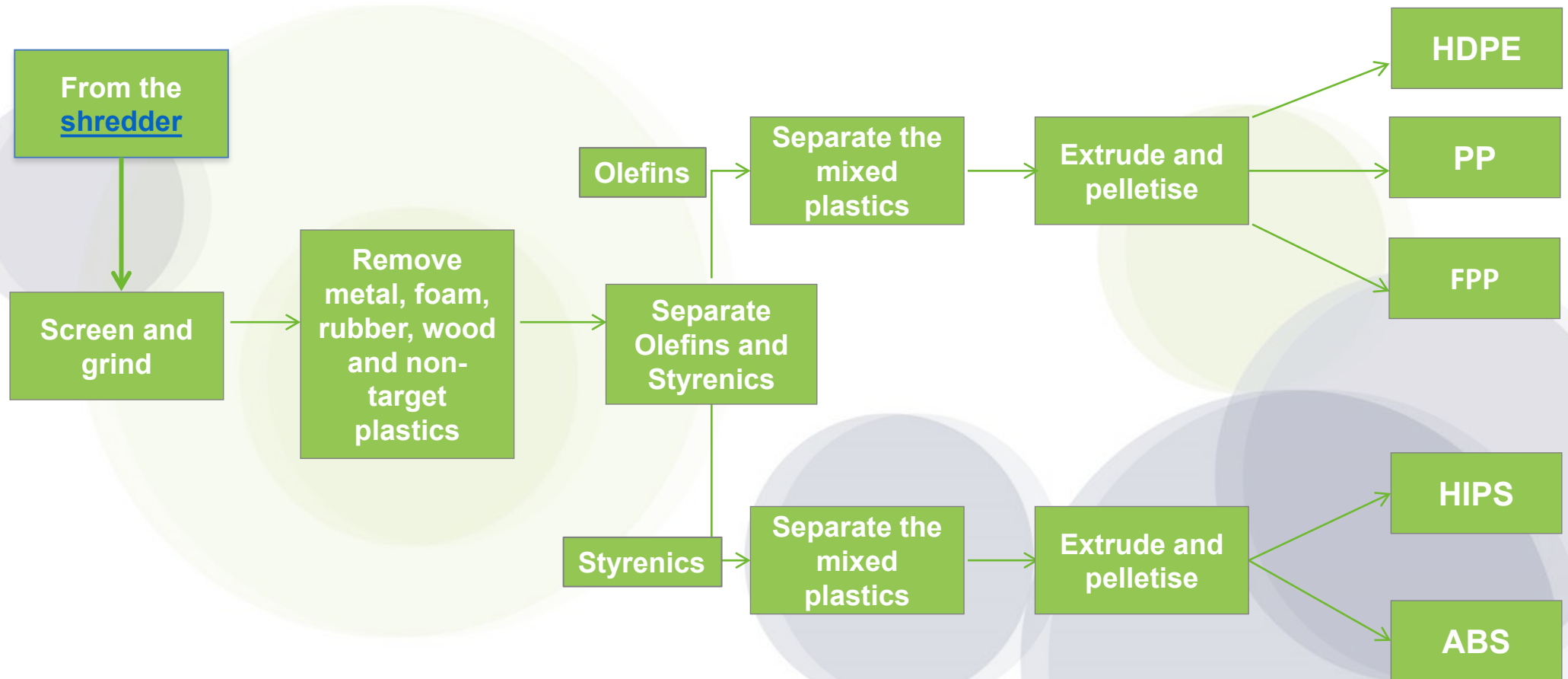


THE WORLDS MOST ADVANCED PLASTICS RECYCLING FACILITIES

MBA Polymers © Confidential 2022



The Process



Our Quality

We're passionate about the quality of our recycled polymers and want you to know about it. Our quality assurance process includes:

- 72 tests per batch and purity tested every 20 minutes
- 24 MFI (Melt Flow Index) and moisture tests per batch containing 24 tonnes
- Every batch is mechanically tested
- Every batch comes with a full COA (certificate of analysis)
- Unique inhouse purity testing technology that allows us to assess product purity in seconds

The culture at MBA is focused on testing, quality assurance, continual investment and improvement. This uncompromising commitment to quality assurance is another reason why MBA is trusted by plastic processors all over the world.



OUR PRODUCTS

Our Offering

MBA Polymers UK are part of the **European Metal Recycling Family (EMR)**, who process around 10m tonnes of materials each year. As a result, MBA are able to provide a **consistent, high volume supply** of polymer that allows you to meet the most demanding of production volumes and delivery schedules.

Our state-of-the-art recycling process separates, cleans and compounds plastic polymer grades including:

- **ABS:** Acrylonitrile Butadiene Styrene
- **PC-ABS** (Polycarbonate / Acrylonitrile Butadiene Styrene Blend)
- **PP:** Polypropylene
- **PP Bumper:** Polypropylene Bumper
- **FPP:** Filled Polypropylene (Talc / Glass)
- **HIPS:** High Impact Polystyrene
- **HDPE:** High Density Polyethylene
- **TPO:** Thermoplastic Olefin
- **Bespoke Services**
- **Closed Loop Solutions**

MBA Polymers © Confidential 2022



ABS Applications

ABS 4125

- Cosmetic Packaging
- Tape Measure (Internal)
- Sprinkler Systems
- Domestic Appliances
- Visible Automotive Parts

ABS 4124

- Vehicle Warning Triangle
- Shoe Heels
- Household Products
- Spools
- Compounding with GF (Automotive)
- Back Plate for Number Plates
- Furniture Feet
- Paper Towel Dispenser
- Door & Window Spacers/Mechanisms
- Non-Visible Automotive Parts



PP Applications

PP 2123

- Storm Drainage
- Wheelbarrow Wheels
- Caravan Steps
- Pipe Fittings

PP 2126

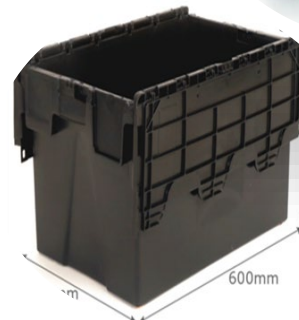
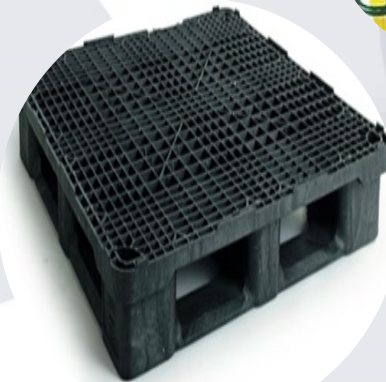
- Furniture Feet
- Plastic Pallets
- Storage Boxes & Lids

PP 2127

- Plastic Pallets

PP 2137

- Automotive Visible/Non-Visible
- Wheel Arch Liners



PP Applications

PP 2172

- Washing Machine Parts

PP 2172 N

- Paint Cans

PP 2181

- Store It Out Shed
- Bio-Media
- Household Bin
- Paint Buckets
- Paint Trays



Product Portfolio

Grade	Density [g/cm ³]	MFR [g/10min]	Flexural Modulus [MPa]	Tensile Stress @ yield [MPa]	Izod Impact Strength [notched, 23°C, kJ/m ²]
ABS 4124	1.055	7	2100	40	10
ABS 4125	1.050	8	2200	40	14
HDPE 1107	0.960	0.25	500	19	15
PP 2123	0.945	8.5	1050	19	15
PP 2126	0.950	6.5	1000	19	24
PP 2127	0.950	7	900	18	25
PP 2137	0.960	10	1100	19	25
PP 2142	0.930-0.960	9-14	>900	>17.5	>7
PP 2142 H	0.950	12	1000	19	14
PP 2143	0.950	12	1000	19	14
PP 2172	0.945	25	950	18	9
PP 2172 N	0.960	26	950	18	9
PP 2181	0.945	35	950	18	7
PP 2131 F20	1.060	10	2200	26	4.5
PP 2125 F15	1.020	4.5	1200	20	15
PP 2131 F20 A	1.050	8	1800	23	6.5
PS 3122	1.045	6	1800	23	7
PS 3132	1.050	6	1800	21	5.5

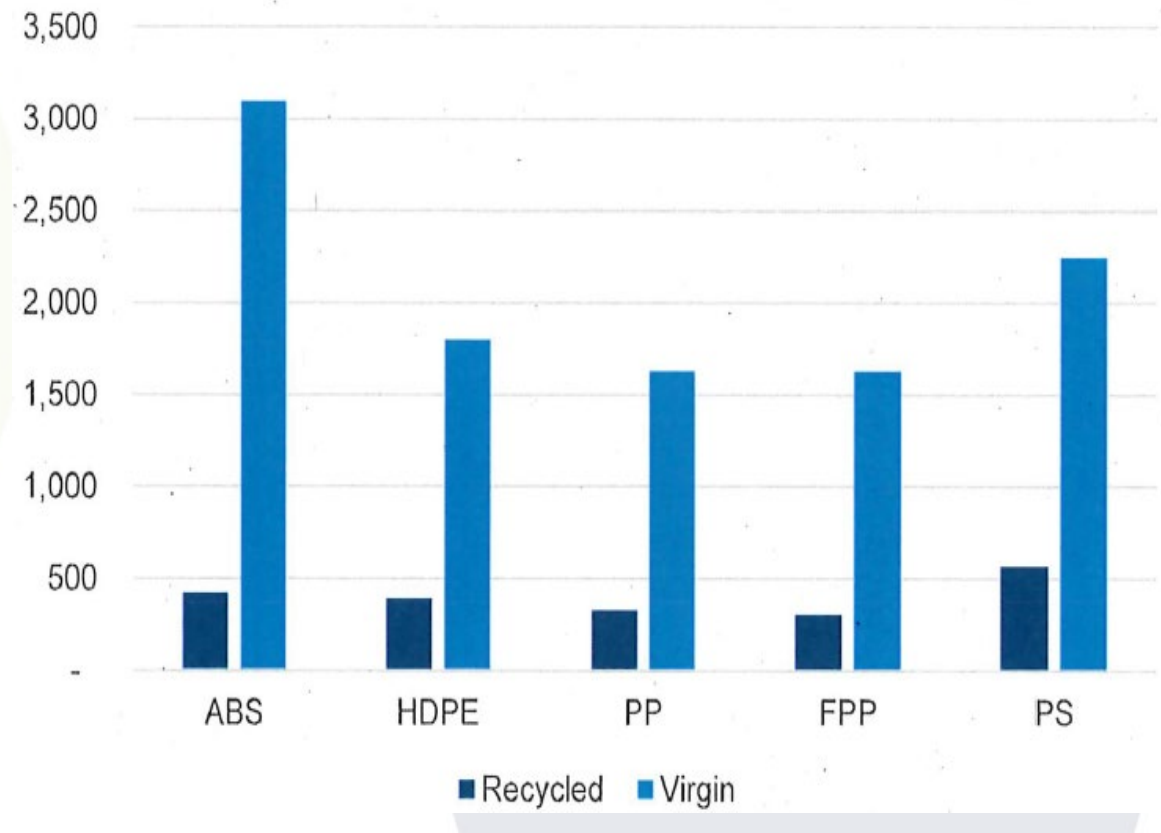
Brands Using MBA Polymers UK



Using Recycled Content and CO2 benefits



1. **Collaboration** – Both the material and the manufacturing process may need to be adjusted.
2. Start with the **low hanging fruit** – recycled plastic is successfully used in multiple applications. Build confidence with the material.
3. **Define the quality requirements** whilst reviewing product design – some products have been over engineered and some standards are mandatory.
4. **Prioritise closed loop** – It's easier to convert a bumper into a new bumper than using a plant pot. Look to match the baseline properties of the source material with the technical demand.



Global warming potential (GWP) of MBA Polymers vs. PlasticsEurope Ecoprofiles in kg CO₂e (Source: Comparative LCA and Certification (2020) Carbon Trust)

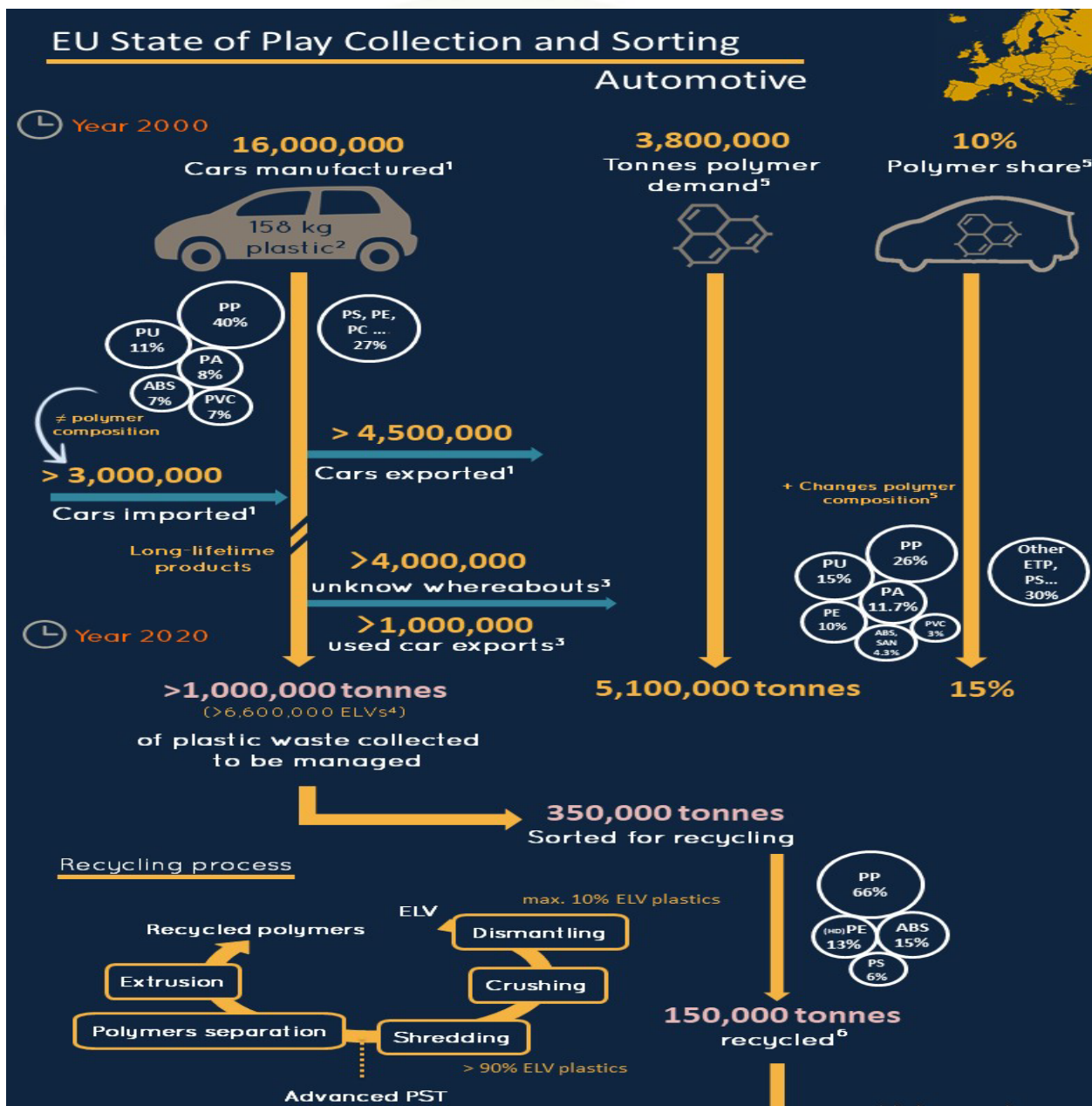
UNTAPPED POTENTIAL OF RECYCLED PLASTICS & MARKET TRENDS



Don't Look up!



The Automotive industry's waste is our opportunity



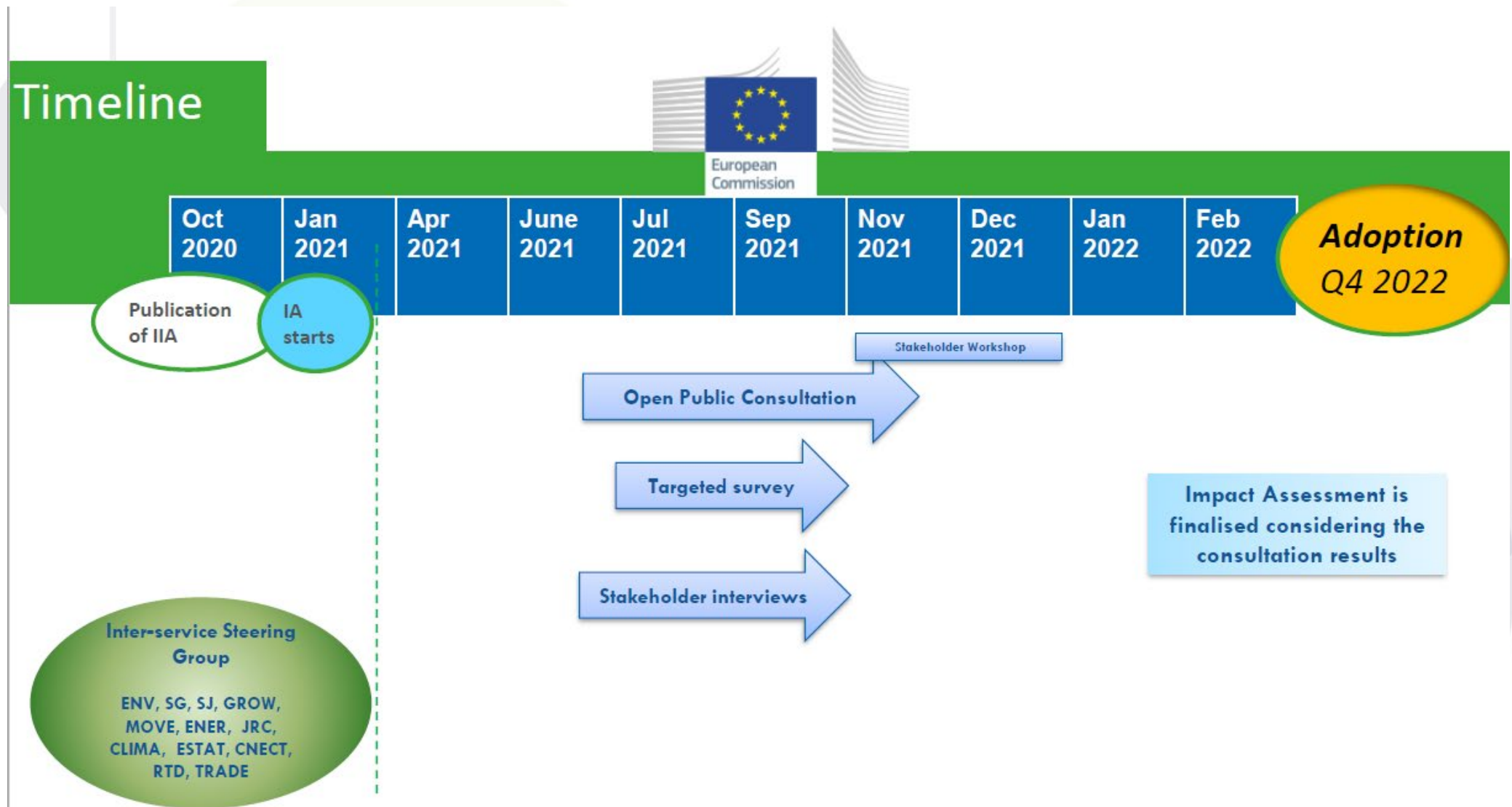
>1 million tonnes of plastic collected from ELV's

Only 350,000 MT sent for recycling

Only 150,000 MT actually recycled

15% actually recycled

Trend in policy and legislation pushing recycled content



OVERVIEW

Our Highlights

**Global leadership with
recognised brand
“MBA Polymers UK”**

**Compelling economic
advantages of recycled
products over virgin
polymers**

**Innovation driver
leading the change to
sustainable polymers
with patented
processing technology**

**Consistency at our core
– Quality, Supply and
Pricing**



**Extensive procedures to
improve Quality
throughout the plant
and onwards to
customers**

**New financial stability
brings stability in MBA
UK strategy**

**Right technology
Right experience
Right markets**

**Growth potential -
maximising
environmental
opportunities**

Learn More About MBA Polymers



The Big SHFT video sponsored by Ford

<http://www.shft.com/watching/the-big-shft-mike-biddle-plastics-pioneer/>

*The Big SHFT: 10 Innovators Changing Our World
... one of the series was entitled "Plastics Pioneer - Dr. Mike Biddle"*



TED talks

http://www.ted.com/talks/mike_biddle.html



MBA Polymers Website

www.mbapolymers.co.uk



QUESTIONS