

# Evolution of Paint Recycling in Circular Economy

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**Providing environment-friendly solutions for the paint industry globally.**

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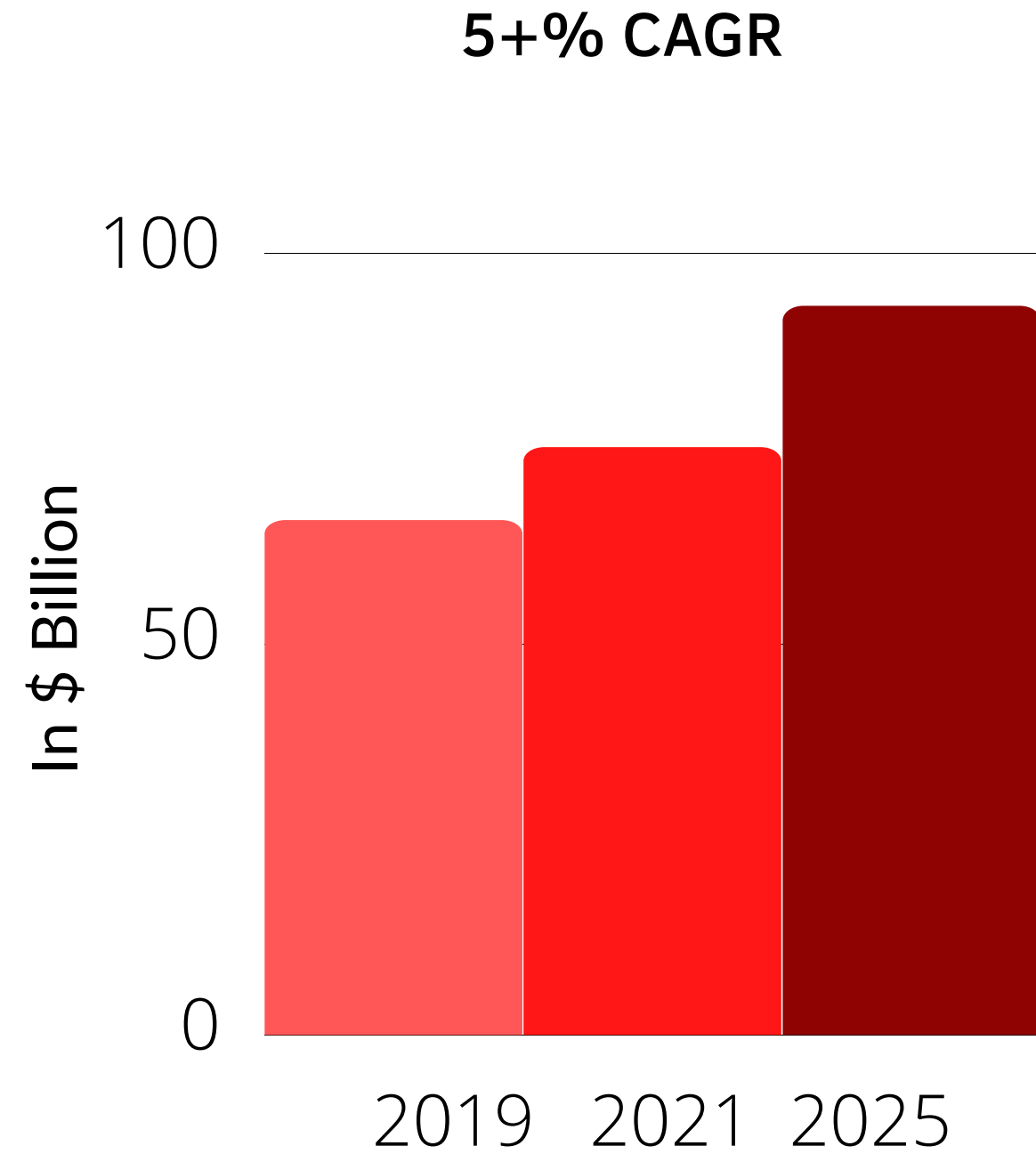
# OVERVIEW



# Overview of the Paint & Coatings Industry

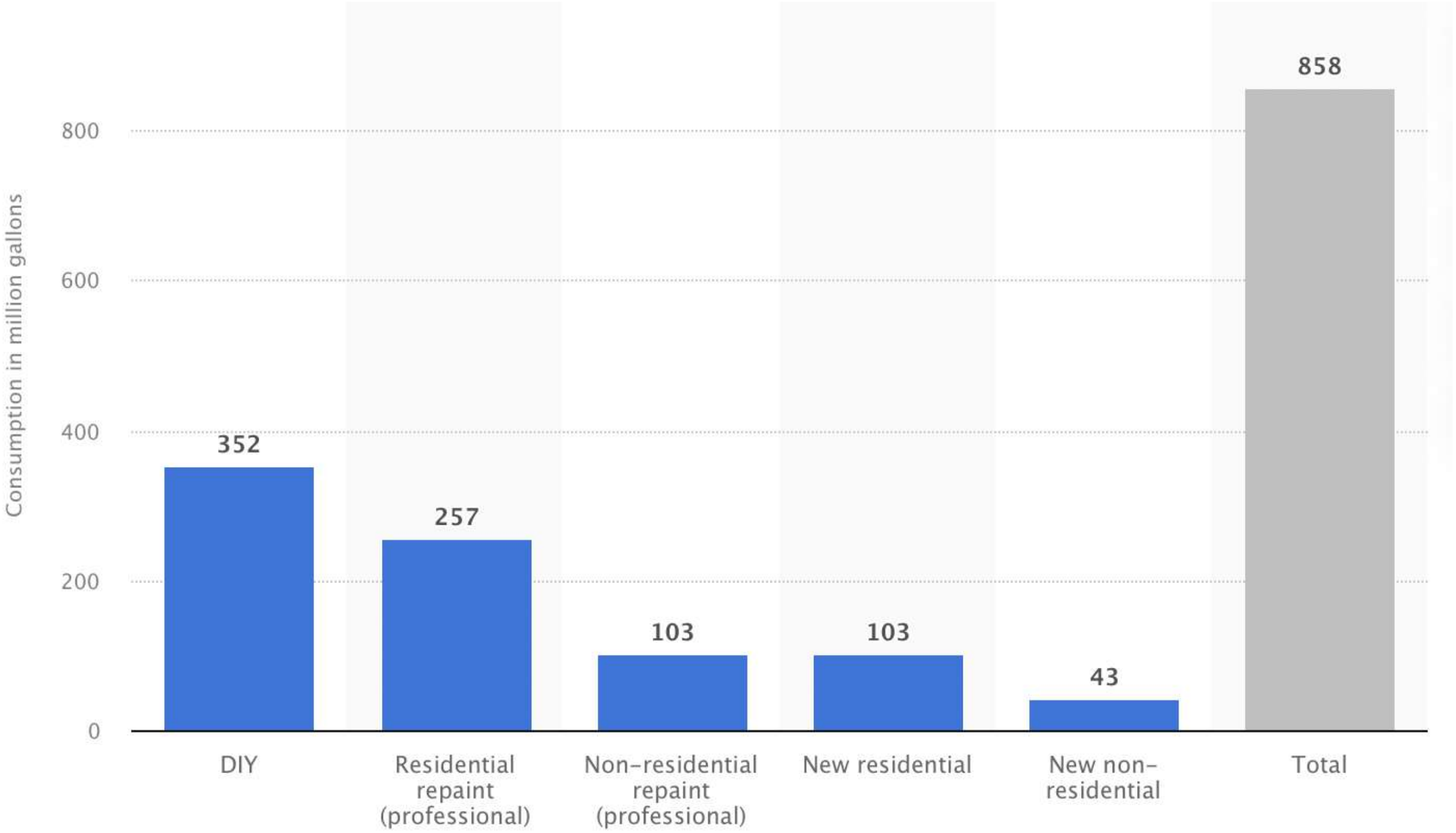
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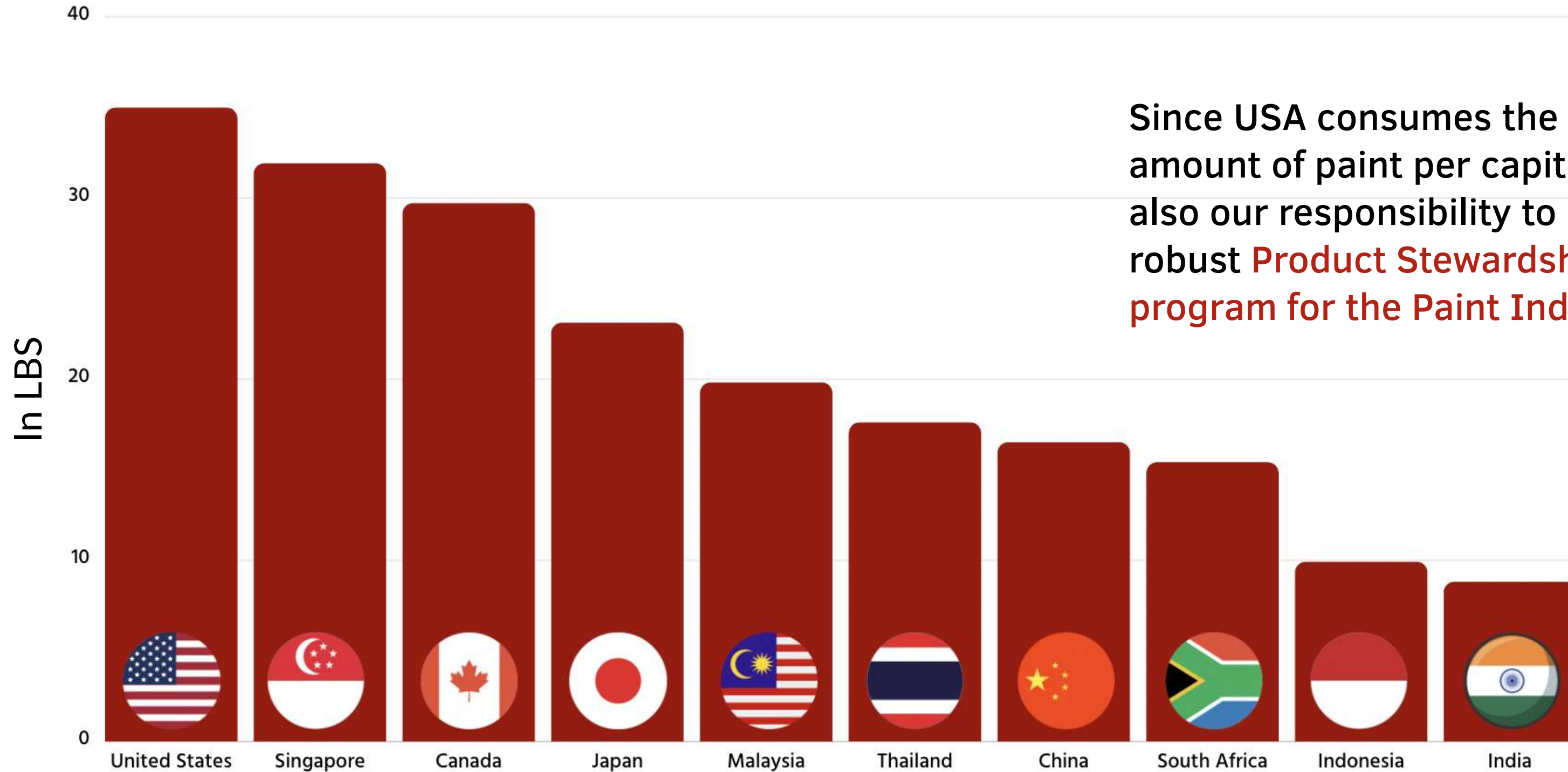
## COATINGS INDUSTRY OVERVIEW- GROWTH

# VOLUME OF ARCHITECTURAL PAINT CONSUMED IN THE UNITED STATES: IN 2020, BY SEGMENT (IN MILLION GALLONS)



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# QUANTITY OF PER CAPITA PAINT CONSUMPTION: IN 2019, BY COUNTRY



Since USA consumes the highest amount of paint per capita, it is also our responsibility to set up a robust **Product Stewardship** program for the Paint Industry.

## ***Addressing environmental issues proactively: Efforts by the industry***

- More than **90%** of architectural coatings sales in the United States are now for environmentally preferable **water-based paint**.
- **97% of all waste** solvents from paint and coatings manufacturing facilities are reclaimed for future use.
- **Low VOC** paint standards have been implemented.
- The total quantity of **electricity, heat and power consumed** from the paint and coatings sector **decreased by 18%** between 2007 and 2012 and this trend is continuing.





# Environmental Hazards & Industry Problems

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## Environmental Hazards & Industry Problems

- **80+ million gallons** (10% of the total paint purchased by consumers annually) of leftover paint is generated annually in the United States of America itself and **sent to landfills** if not recycled.
- Consumption of **virgin raw materials** in paint manufacturing have huge environmental impacts. If substituted by leftover paint, it will reduce environmental impacts.



## Environmental Hazards & Industry Problems

- Land, water and even the air we breathe is affected by paint waste.
- **1 gallon of paint** in landfills can ruin an entire year supply of **drinking water for almost 50 people.**
- These can have **serious health concerns** for human, animal and plant life globally; not to mention the damage it causes to nature.
- Millions of **plastic/metal paint cans** are **landfilled** after being used by the paint industry annually.



# Solutions & Advancements in the Paint Recycling Industry



## ***SOLUTIONS THROUGH PAINT RECYCLING: REDUCING THE GAP***

- **Product Stewardship:** This is a principle that brings all entities involved in a life cycle of a product to take shared responsibility for reducing the environmental adverse impacts of the product right from the production stage to end of the life management.

Effective implementation through the EPR model.

- **Extended Producer Responsibility (EPR):** This is a policy mechanism which helps implement a 'zero-waste' future in a circular economy. EPR shifts primary responsibility to the producer; all stake holders must contribute.



**Less in the landfills**



**More on the walls**

## SOLUTIONS THROUGH PAINT RECYCLING: REDUCING THE GAP

- **PaintCare:** ACA's non-profit 501(c)(3) organization, represents paint manufacturers (paint producers) to plan and **operate paint stewardship programs** in U.S. states and jurisdictions that pass paint stewardship laws.
- PaintCare's accomplishments include:

**50 MN +**

Gallons

of paint collected for recycling through various centers to date

**10**

States + District of Columbia

New York State starts -2022

**2000+**

Centers

For collections of paint  
Established across USA

- **GDB International Inc. recycles a significant portion of all paint collected.**



## Challenges overcome with SCPR at GDB:

- Long shelf life
- Improved quality
- Product consistency
- Reduced quantity of final waste disposal
- Capability of producing lighter shades



### Sorting

(Segregating oil from latex, latex sent for inspection)

1



### Inspection

(Removing foreign particles, Dried/gelled product removed)

2



### Pouring

(By color and type, big chunks sent to HSD)

3



### High Speed Dispersion

(Paint and particulate blending & breakdown)

4

8

### Packaging

(Labelling & filling)



7

### QC Testing

(Shade matching)



6

### Filtration

(Gritty paint sent back to HSD)



5

### Testing & Addition

(Hiding & other properties)



# GDB'S PAINT RECYCLING FLOW CHART

# ***GDB'S VISION: SUSTAINABLE MODEL FOR PAINT RECYCLING***



- Development of a wide range of applications for Recycled Paint.
- Recycling off-spec raw materials- raw material companies can benefit and play an important role.
- Collaboration with universities to provide Educational and R&D opportunities for graduate students



### PAINT FOR RECYCLING

- Off-spec/ distressed inventory
- Post-consumer paint

+

### OFF-SPEC RAW MATERIALS

- Thickeners
- Defoamers
- Surfactant
- Emulsions
- Colorant
- Titanium Dioxide
- Wash Water
- Wash Solvent

=

Evolve's range of  
Premium Eco-friendly  
Paint, Primer and  
Coatings



# USING OFF-SPEC RAW MATERIALS AT GDB



# GDB'S CIRCULAR MODEL: HELPING BUILD A SUSTAINABLE FUTURE



- Complete shift from 'waste management' to '**resource recovery**'.
- Reduction in consumption of virgin natural resources.
- Product life extension through **value addition**.
- Environmentally sustainable model allows for the **natural regeneration** of depleted resources.
- More recycling would mean **lesser quantities** of production waste, cleaning waste and packaging **waste**.



# Challenges faced by the Recycling Industry

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# CHALLENGES FACED BY THE RECYCLING INDUSTRY

- Even though there has been so much advancement in this field, this is still a certain **lack of acceptability** towards recycled paint in the market as compared to virgin paint.
- This may be due to **misconceptions** that buyers may have with regards to the content, quality and performance of recycled paint.
- **Consumers** need to be **educated** about the **benefits of recycled products** for Product Stewardship programs and EPR to be completely effective.



## Stigmatic view of recycled paint products



- Smelly
- Low coverage
- Rough finish
- High VOC
- Unprocessed
- Low hiding
- Low performance

## Actualities of recycled paint products



- Low/no odor
- Good coverage
- Smooth finish
- Low VOC
- Remanufactured
- Good hiding
- High performance





# Looking forward: *A Step in the Right Direction*

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## **LOOKING FORWARD: A STEP IN THE RIGHT DIRECTION**

- Establishment of the **International Paint Recycling Association (IPRA)**, the world's foremost paint recycling association comprising of all leading paint recyclers on a global stage.
- IPRA bolsters the expansion of Extended Producer Responsibility and Product Stewardship for paint programs.





***1 gallon of recycled paint saves 100 Kilowatt-hours of energy and keeps out 115 pounds of CO2 from the air.***

***Paint recycling is the key to a greener paint industry.***

# **GDB INTERNATIONAL, INC: ENVISION A BETTER TOMORROW**

- Producing **premium quality paint** utilizing **off-spec raw materials**.
- Over **1 billion pounds of latex and oil paint recycled** (127 million+ gallons).
- Production & **development of leading private label brands** for customers worldwide.
- **Establishing retail stores** for sale of **recycled paint** – availability and convenience to customers
- Operations within the **United States** from Nashville (IL), McAllen (TX), New Brunswick (NJ), Las Vegas (NV) and Seattle (WA); **Global Operations** from Netherlands, Australia, New Zealand, India, Ghana, UAE, Mexico and Guatemala.





# ***GDB INTERNATIONAL, INC: PAINT IS OUR PASSION***



**25+** GDB International Inc.'s years of dedication to paint recycling

**450+**  
**Employees**

worldwide involved in paint recycling and logistics.

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**1.9M+**  
**Square feet**

of recycling centers and warehousing space.

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**1.1B+**  
**Pounds**

of latex and oil paint recycled to date.

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**13M+**  
**Gallons**

of paint processed annually for recycling at GDB.

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# QUESTIONS?

Reach me at [sanjeev@gdbinternational.com](mailto:sanjeev@gdbinternational.com) for queries and partnerships, or log onto [www.gdbpaint.com](http://www.gdbpaint.com) for more information.



**Corporate Headquarters:**  
1 Home News Row,  
New Brunswick, NJ 08901, USA.

**Central Recycling & Reprocessing Facility:**  
17396 Mockingbird Rd, Nashville, IL 62263, USA.

**Various other locations within the USA:**  
Texas, New Jersey, Washington, Nevada, Florida  
& Missouri.