BRIEFING TO THE ENVIRONMENT AND NATURAL RESOURCES COMMITTEE; MAINE LEGISLATURE

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AGENDA

- About RRS
- Challenges in the recycling marketplace
- Role of EPR in addressing the challenges

ABOUT RRS

SINCE 1986 serving industry/governments/non-profits

- Plan and implement materials management and zero waste solutions
- Facilitate recovery value chain collaboration to increase commodity recovery for industry and municipalities
- Analyze packaging recyclability and compostability
- Business case and net system cost analysis
- End market and recovery systems development for circular economies
- Adapt MRF systems & composting facilities with new technologies to process today's recyclables
- Develop and implement multi-stakeholder communications and outreach

RRS | recycle.com

WHO WE ARE

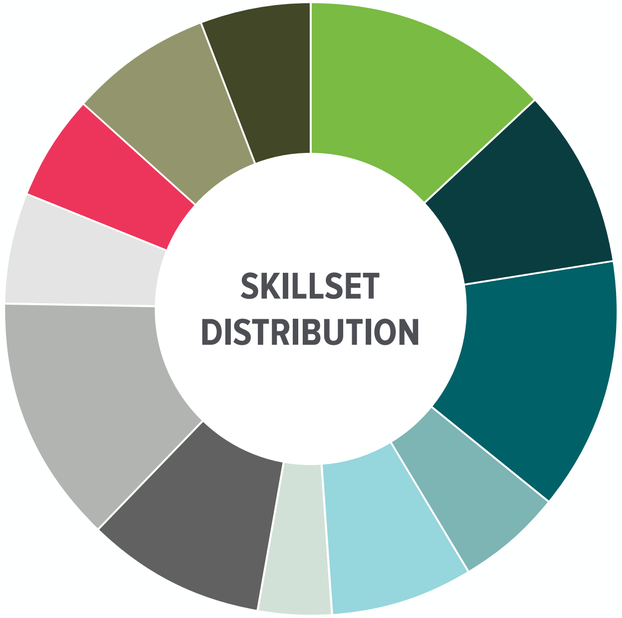
30 years in recycling and managing resources

40 employees in 3 countries

660 years combined field experience

1,000 projects across 9 markets

OUR SKILLS



- RECYCLING/SOLID WASTE PLANNING
- ORGANICS/COMPOST
- COMMUNICATION/EDUCATION
- ENGINEERING
- POLICY/LEGISLATION
- HAZARDOUS MATERIALS SAFETY & COMPLIANCE
- PROJECT FINANCE/ECONOMICS
- MRF OPERATIONS & MATERIAL FLOW STUDIES
- DATA ANALYTICS & DESIGN
- CORPORATE SUSTAINABILITY
- COLLABORATION FACILITATION
- ADMINISTRATIVE

CHALLENGES IN THE RECYCLING MARKETPLACE

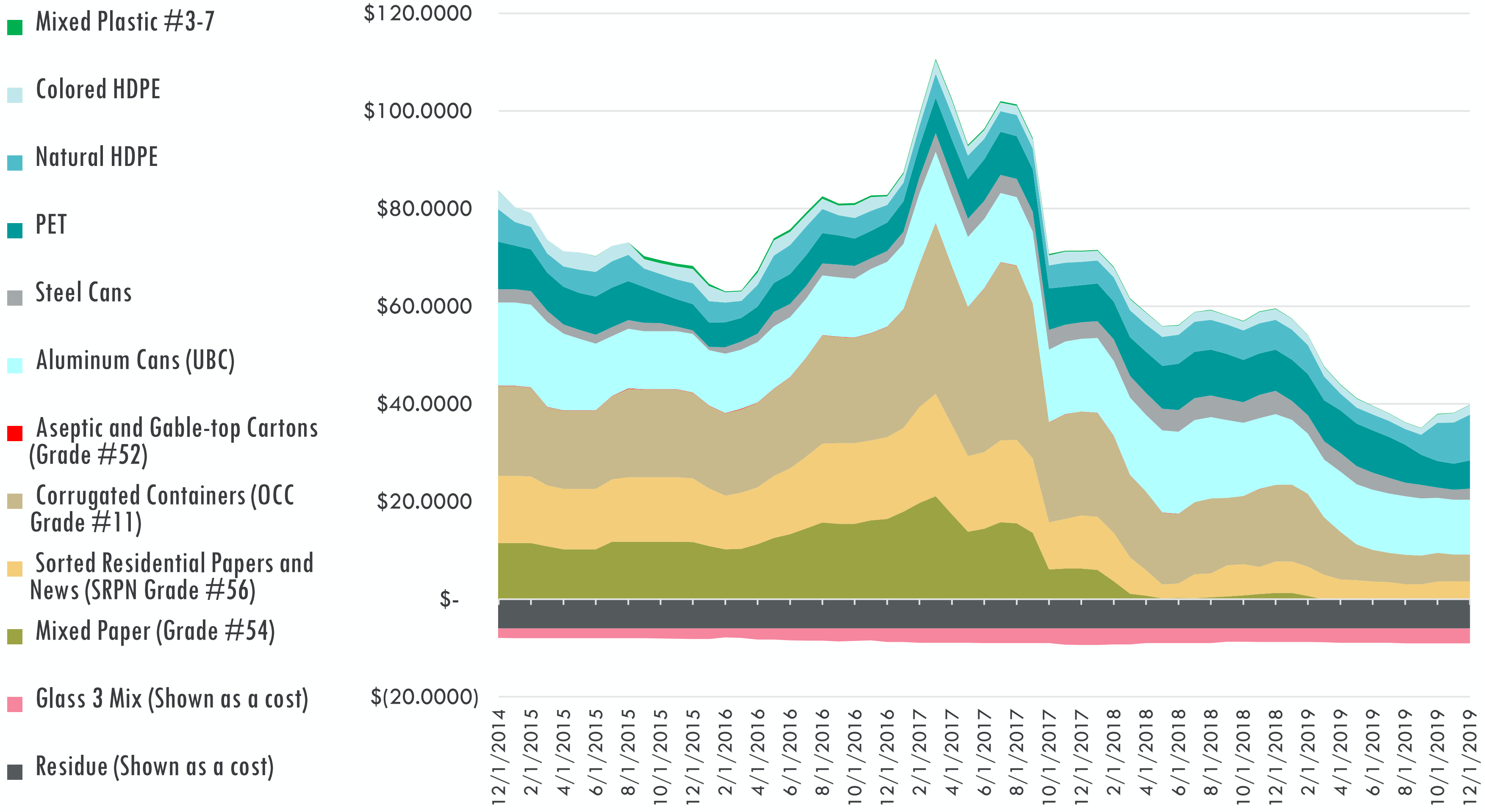
COMMON COMMUNITY CHALLENGES:

- Volatile recycling markets
- Pressure from MRFs to drop materials
- Paying for recycling (processing fees), instead of being paid (rebates)
- Questions from administrators / elected officials on program costs
- Public expectation of access to recycling

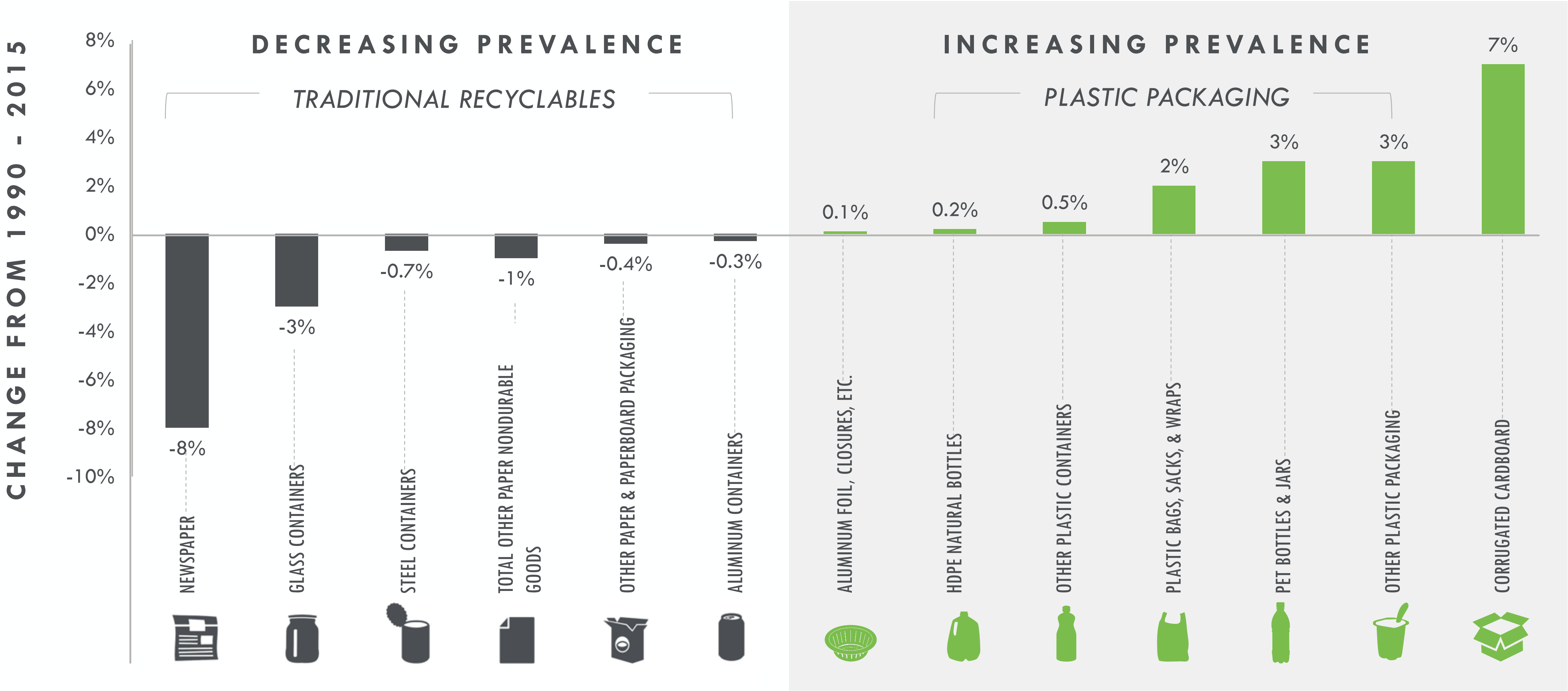
ECONOMIC CHALLENGE: DRAMATIC DROP IN RECYCLING REVENUE

2-YEAR COMPARISION

- Mixed Paper has decreased by 98%
- SRPN has decreased by 68%
- NHDPE has increased by 97%
- PET has decreased by 24%
- Aluminum has decreased by 24%
- Metals and Plastic currently make up 9% of the stream volume, and 88% of the value



THE EVOLVING TON: CHALLENGES THE INDUSTRY



Source: RRS From packaging generation by weight US EPA Advancing Sustainable Materials Management 2015

ECONOMIC CHALLENGE: MRF COSTS CONTINUE TO RISE

COST INCREASES DUE TO:

- Need to slow the line to meet new quality specs
- Increased transportation costs
- Prevalence of lighter material means more items need to run to reach tonnage target
- Increasing contamination
- Aging MRFs coping with new mix of materials

U.S. MATERIAL RECOVERY FACILITY Inbound Processing $/Ton				
Cost Category	2009	2015	2018	Change
Fixed	$12.00	$20.00	$25.00	108%
O&M	$46.00	$54.00	$60.00	30%
Residue	$4.00	$8.00	$9.80	145%
TOTAL	**$62.00**	**$82.00**	**$94.80**	**53%**

AT THE SAME TIME… CORPORATIONS NEED RECYCLED CONTENT TO MEET GOALS

PEPSICO

Keurig DrPepper

Nestlé

verizon

DIAGEO

Reckitt Benckiser

Walmart

COLGATE-PALMOLIVE

SC Johnson
A FAMILY COMPANY

LG

P&G

Coca-Cola

DANONE

Microsoft

SUPPLY DEMAND IMBALANCES

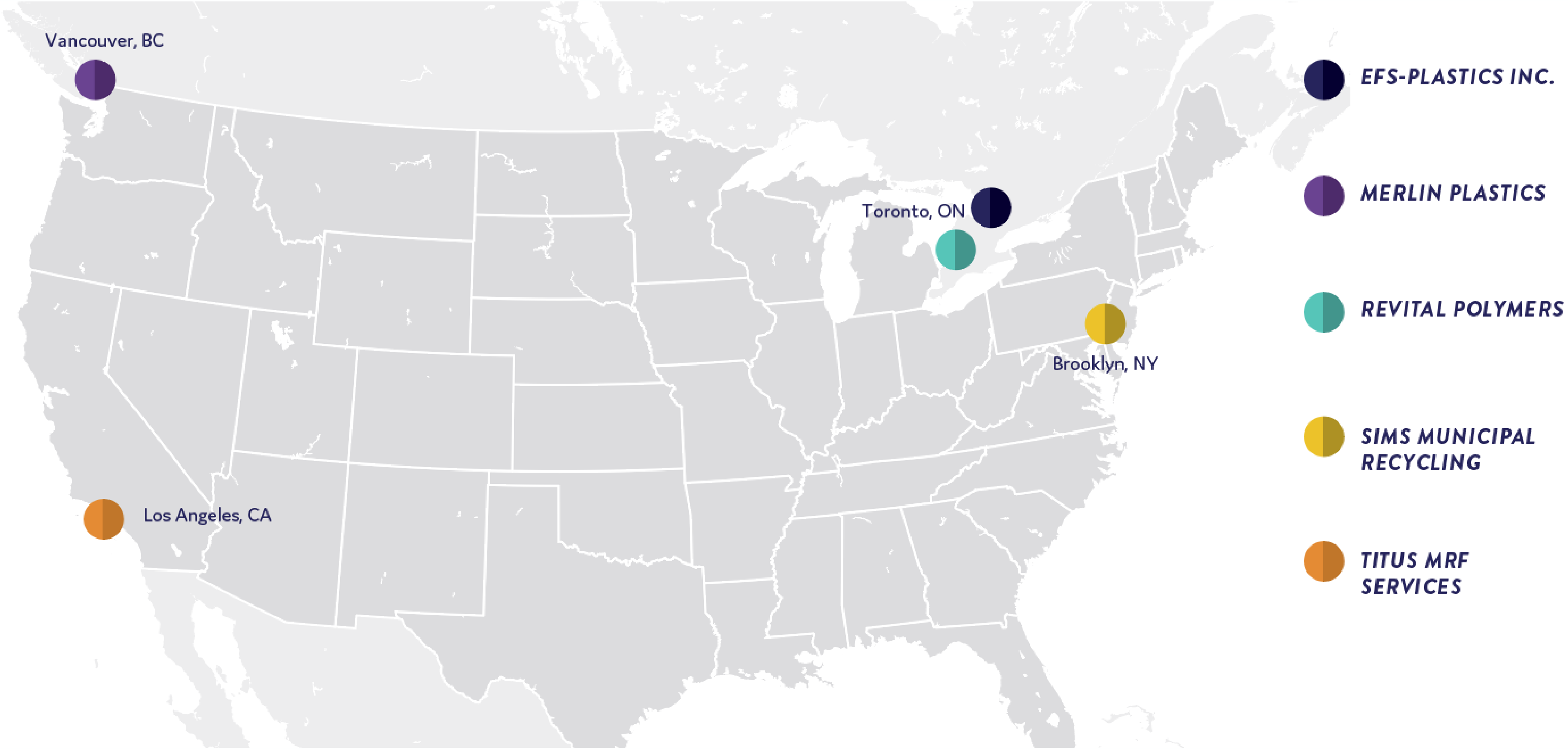
Domestic demand for some materials outstrips supply

PET Bottles | HDPE | PP

Domestic demand is weak for others

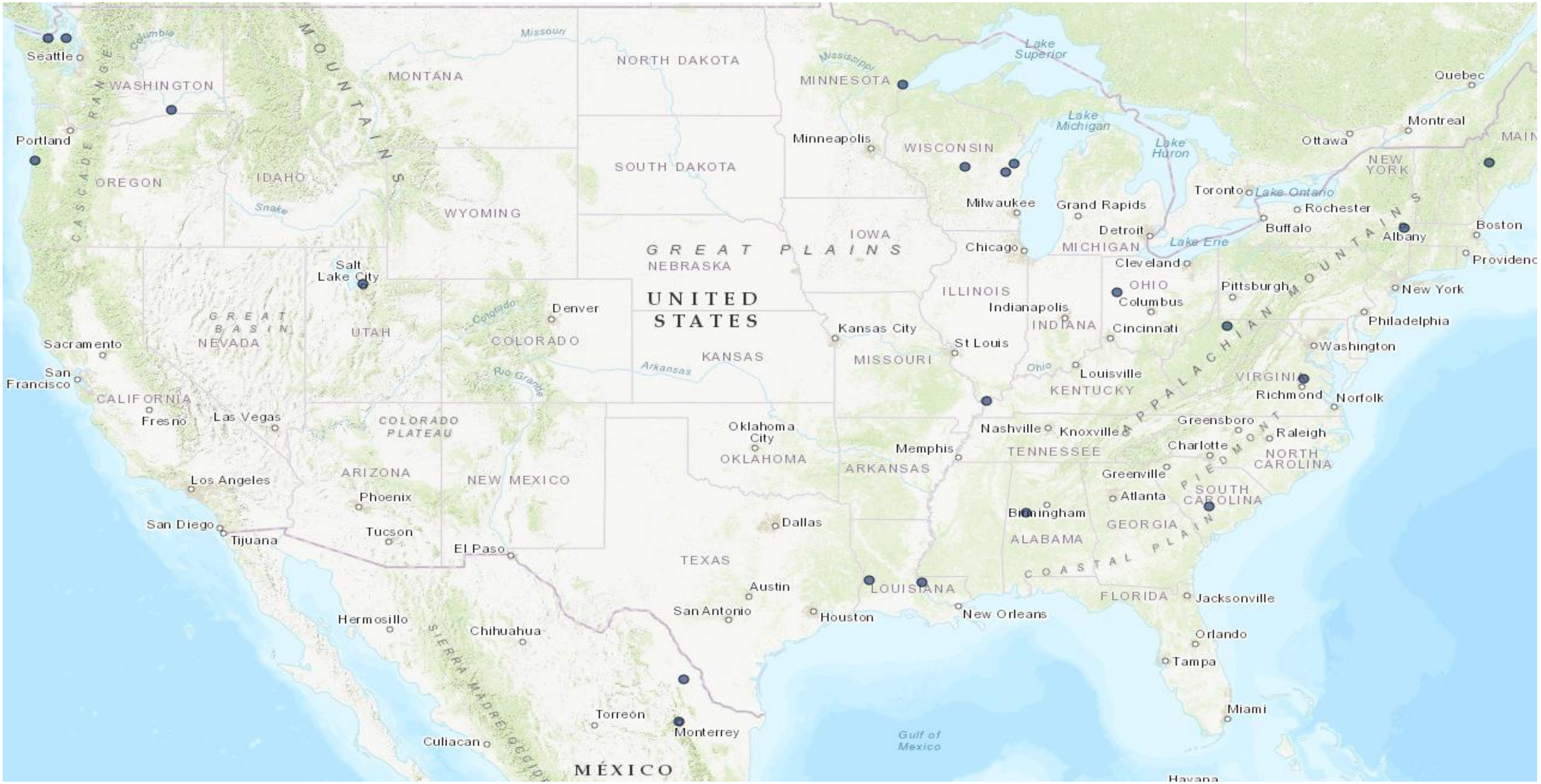
Paper | Cardboard | Other plastics

MIXED PLASTICS MARKETS ARE NOT DEAD!



NEW RECYCLED PAPER MILL CAPACITY IS BEING ADDED

See NERC report



US RECYCLING FACES CHALLENGING TIMES

- Asian import restrictions are not the cause of the challenges; but have exposed weaknesses in the recycling system:
  - Consumer confusion about what is recyclable / contamination
  - Outdated processing infrastructure
  - Need for domestic market development for some materials, more supply for others
  - Fragmented system

OPTIONS TO ADDRESS CURRENT CHALLENGES

- Communities and states have multiple options to address current market dynamics, for example:
  - New funding sources for recycling (e.g., tip fee surcharges, advanced disposal fees, generator fees, etc.)
  - Requirements for recycling education, access, etc.
  - Minimum recycled content standards for products / packaging
  - Investment in infrastructure & market development
- EPR for packaging and printed paper offers some distinct advantages

ROLE OF EPR IN ADDRESSING THE CHALLENGES

INTEGRATION AND COORDINATION

- EPR fosters system integration
- Producers apply supply-chain thinking to recycling system
- Shifts commodity risk / cost burden from municipalities onto producers
- Stronger data collection, reporting and accountability

ADDRESSING CONTAMINATION

- Producer responsibility organization (PRO) education resources can be applied to implement best practices to combat contamination

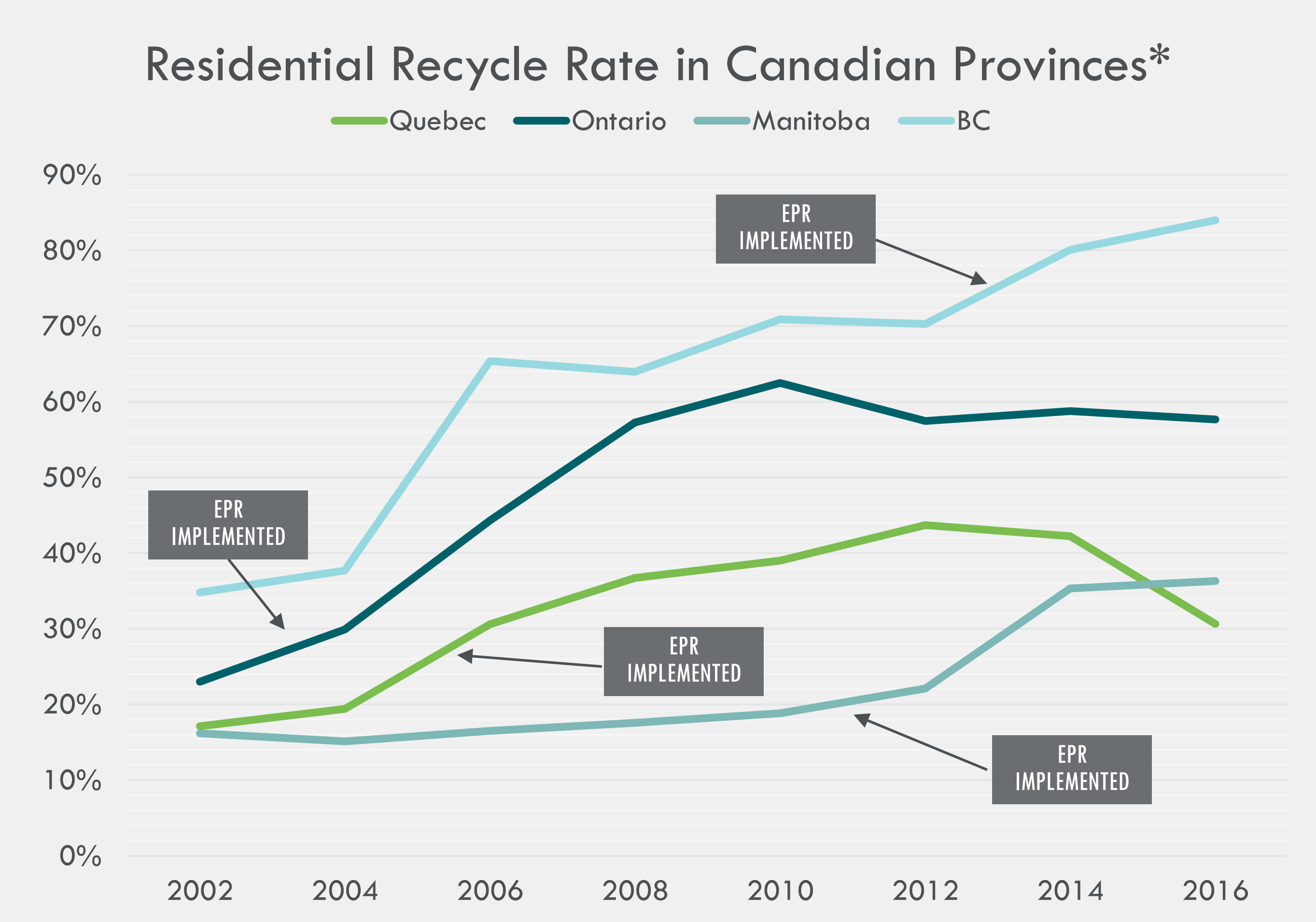
PROCESSING INFRASTRUCTURE

- PRO's focus infrastructure investments on key needs, i.e., MRF / sortation upgrades. Examples include:
  - Ontario: Continuous Improvement Fund
  - EEQ: Glass processing investment
  - Canadian Stewardship Services Alliance (CSSA): Step 4 of the 4 Step Fee Methodology (governs ON, MB, SK, BC)

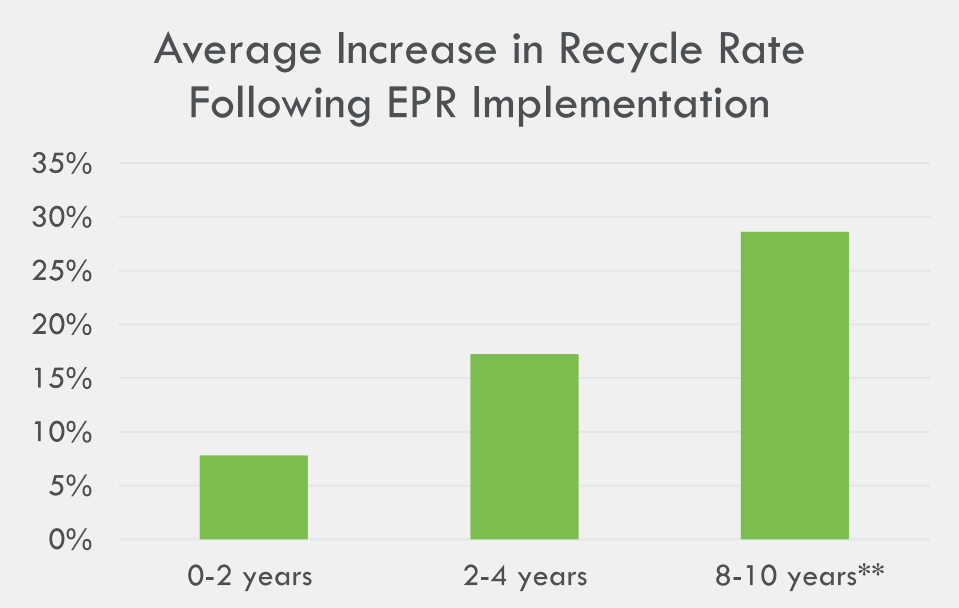
SUPPLY/DEMAND IMBALANCE

- EPR programs typically increase recycling rates, to create additional supply of valuable recyclables and feed domestic recycling-based manufacturing
  - Recovery rates for packaging materials in Germany range from 75 to 99%
  - On average, recycling rates in Canadian EPR programs increased by 17% after 2 to 4 years
- Recycled content incentives will help to create additional demand and spur additional investments in recycling-based manufacturing

RECYCLE RATES FOLLOWING EPR IMPLEMENTATION



Average increase Immediately following EPR Implementation	8%
Average increase after 2-4 years of EPR	17%
Average increase after 8-10 years of EPR**	29%



Source: Statistics Canada
*Recycle Rate calculated by dividing amount recovered by amount generated looking only at the residential sector.
**Only Quebec and Ontario have been implemented that long

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