

Analysis of standards and certification protocols for verifying recycled content in plastic products

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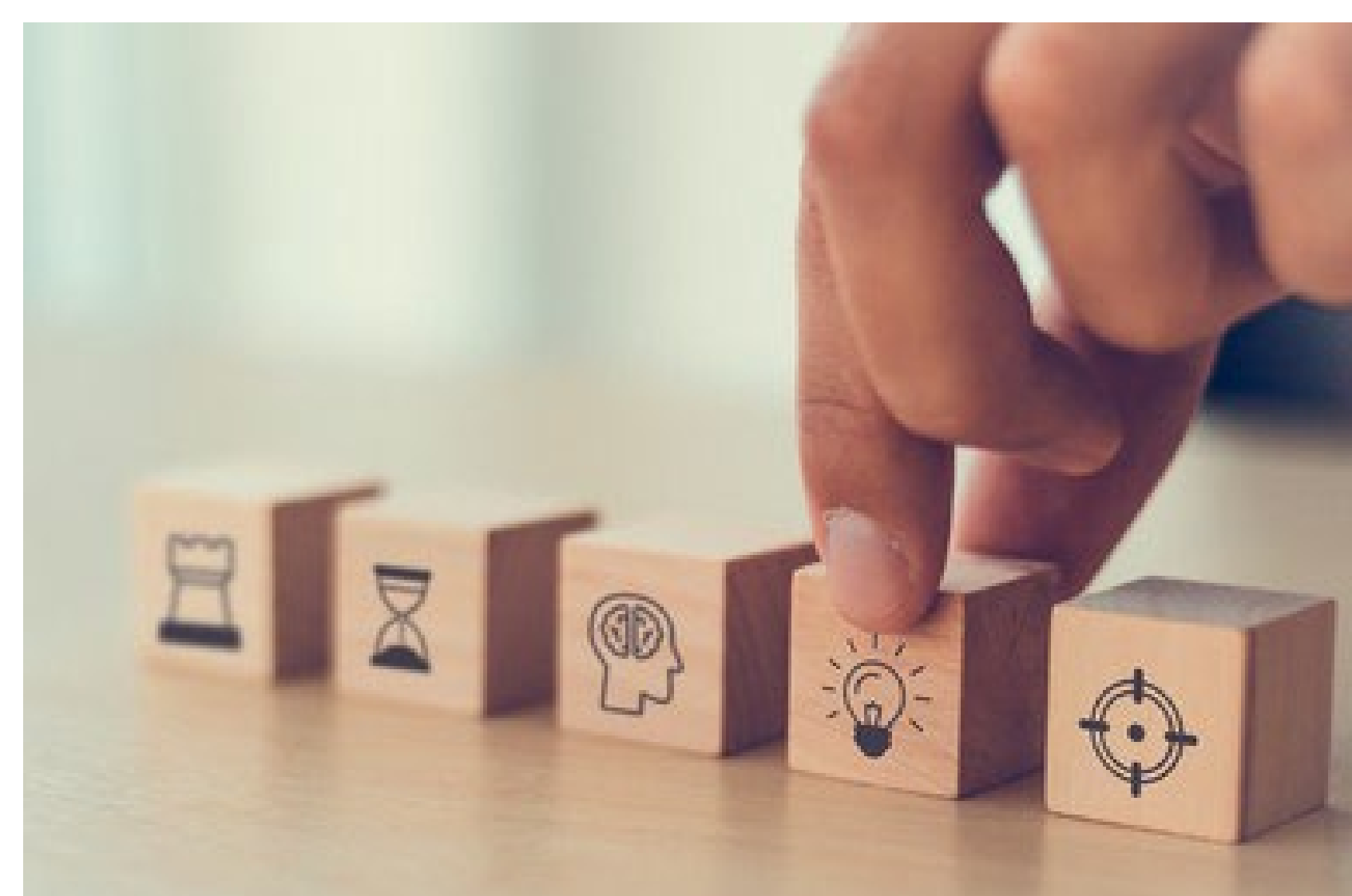
Introduction

According to Oceana (2021), Canada generates approximately 3.3 million tonnes of plastic waste per year, and about 2.8 million ends up in Canadian landfills every year. Furthermore, every year, Canadians use almost 15 billion plastic bags and every day, they use close to 57 million straws. And in Canada, more than one-third of the plastics made are for single-use products or packaging. OECD (2022) indicates that only 6% of plastics are recycled, meanwhile 7% is mismanaged & uncollected and 4% is incinerated releasing carcinogens into the atmosphere, soil, and water as a result.



<https://www.rcinet.ca/en/2019/10/10/fast-food-outlets-top-lists-of-plastic-litter-in-canada/>

Methods



- **Looking at other comparable case studies.**
- **Evaluating pertinent technical information.**
- **Investigating how blockchain-enabled marketplaces are utilized in various verticals and how this can be applied to the plastics industry.**

Results

- Relevancy of Eunomia Report.
- Extended Producer Responsibility in Alberta.
- Token-based marketplaces.
- Plastic recycling ecosystems in other countries.



Conclusions

- Provinces in Canada have been implementing EPR since a long time ago, and they have some similar characteristics, like diverting waste away from landfills and establishing that producers have full responsibility and costs whereas stewardship initiatives are partially supported by government or consumer environmental fees.
- The Government of Alberta will launch the EPR in Fall 2022. And will focus on residential recycling and hazardous and special products. It will represent an important booster to promote the collection and recycling system, including plastics, considering that in Alberta there are only 4 plastic recycling plants.
- The reciChain program will have several positive effects on the province of Alberta, including a decrease in overall contamination and an increase in recyclability; a rise in the demand for novel solutions to plastics recycling; greater auditability of recycled content in support of Extended Producer Responsibility (EPR) programmes; a shift in consumer attitudes toward the use of virgin plastics; and increased brand loyalty for provincial businesses.