



GreenToken

Enabling Circular Economy With GreenToken

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The Challenge



Base line

- Brandowners want to use recyclates in their final products and want to claim that
- Chemical recycling companies are producing oil from different waste sources
- The value chain from waste to brand owner is very long (e.g. ~10 steps within chemical Industrie; 5-10 steps between chemical industry and brand owner)



The Challenge

- How to make sure, that the waste material is linked to the final brand product?
- How to show that in a credible and convincing way?

Long value chains need traceability and tracking of waste based raw materials



Deliverables

Blue print of tracing system

- Transfer waste origin to end product
- Development of IT tracking system
- Physical prototype product produced



Targets

- Increase credibility and trust in final products produced with chemical recycled products
- Enable Brand owners for a credible chain of custody communication



Who are we looking for? Someone from...

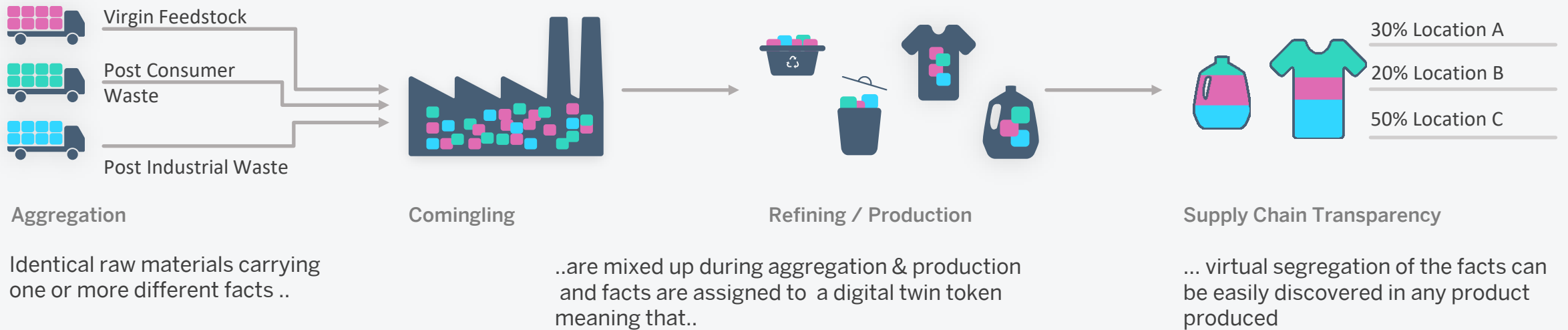
- IT/Data companies
- Chemical industry
- Converters
- OEMs or brand owners

GreenToken's Vision

**Create Accountability and Traceability
across bulk Raw Material Supply Chain**

GreenToken provides full Chain of Custody

Built using the idea of multi-fact tokens and blockchain, GreenToken is a multi-commodity platform that enables fact tracing for commingled raw materials to their origin and virtual segregation reporting of these facts:



GreenToken by SAP is a Software-as-a-Service (SaaS) multi-commodity traceability platform that gives transparency to any fact in any raw material supply chain without using batches. GreenToken is a cloud based solution and is open to everyone, not just existing SAP customers. GreenToken works equally as well with segregated, identity preserved as well as mass balance supply chains.

High-Level Personas & Process



Chemical Producer

- How do I reduce the manual reconciliation of sustainable volumes?
- How do I prove where I source from?

- Chemical company record diverted waste procured on the platform
- Incl. Origin- and other CoC data and certifications
- A 'digital twin' per unit quantity token is created with all this data



Processor

- How do I prove where I source from?
- How do I keep my data safe?
- How do I improve collaboration with my stakeholders?

- Processor buys the chemicals and converts into intermediate product- triggers a Token Transfer
- GreenToken records the multiple levels of processing and enables configurable yields per location



Brand

- How do I enhance my brand?
- How do I mitigate my risks?

- Access to Multi-Fact Chain of Custody Data
- Source, certification, Origin of circular polymer
- Private Data is secured on the immutable blockchain
- Ability to quickly trace oil origin and other facts if a sourcing risk is raised internally or externally

Chain of Custody (CoC)

Deployment – SaaS:

GreenToken works with or without SAP System, accessible by all

Multi-fact Origin Data while preserving 1 up /

1 down Visibility:

Confidential data is only shared with your direct suppliers and buyers

Supply Chain Persona Value Proposition



Chemical Producer

- Risk Mitigation
- Product Differentiator
- Efficiency
- Sustainable and Ethical Audit



The Chemical companies can now differentiate their products. Its possible for virtually segregate the sustainable credentials and share the same with your customers.



Processor

- Risk Mitigation
- Product Differentiator
- Efficiency
- Sustainable and Ethical Audit

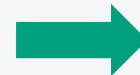


The Processors too can differentiate their products and explore new business models. The virtual segregation feature allows a processors to share Sustainability credentials with their customers, showing YoY improvements against milestones.



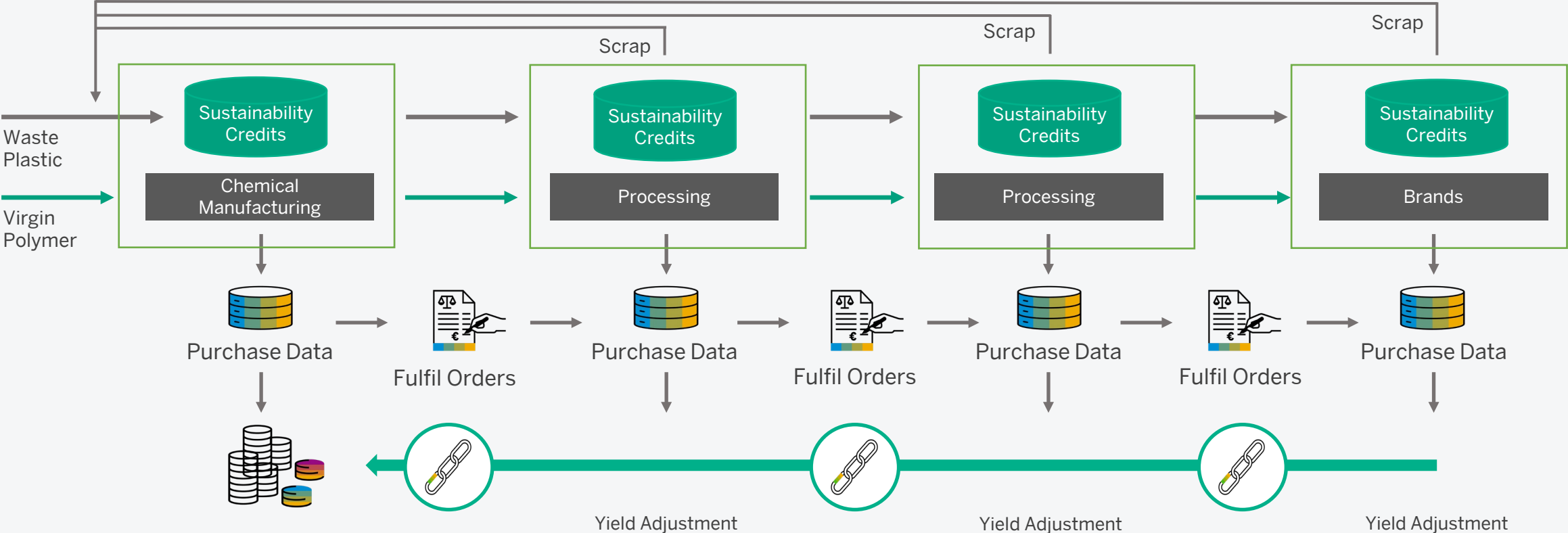
Brand

- Risk Mitigation
- Pro-active rather than reactive
- Brand Enhancement
- Change Driver



The brands get benefitted with auditable data for use of circular polymer in their supply chains. The efficiency is gained by automated reporting and reduced errors.

Circular Polymer Use Case



Tokens allocated to plastic waste at 1st point of aggregation based on one or more facts

Using (1) mass balance, (2) tokenization and (3) chain of custody on blockchain we trace any fact or facts through the supply chain

As raw material is transformed then the tokens too can be yielded at the correct yield ratio

The remaining GreenToken count allow for mass balance reporting. Reading a token gives us origin facts

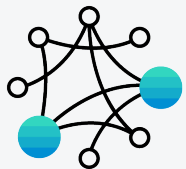
GreenTokens Value Proposition



Increasing Circularity: minimizing the input of virgin natural resources by proving the use of return flows in new circular polymer



Risk Reduction: ensuring companies only source from suppliers that meet their sustainability and ethical policies



Better Stakeholder Collaboration: building industry standards around tokenized raw material transfer, while incentivizing actors with tokens



Brand Enhancement: increasing consumer trust, exploring new business models and achieving sustainability across a supply chain



Efficiency Gains: working across silos, eliminating manual reconciliation of volume records and hence producing better accurate auditable reports in the quickest of time using the least resources.



Enabling Interorganizational Accountability: validating sustainability claims with to substantiate ethical sourcing claims



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Thank You

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