# Discovering the Provenance of Palm Oil

MIT Supply Chain MANAGEMENT    MIT Center for Transportation & Logistics

## Motivation / Background

There is no guaranteed mechanism that tracks the physical movement of goods in the food industry. In the food industry, consumers are demanding more and more visibility and assurance in the sustainability of the supply chain. This is of particular concern in the **Palm Oil Industry.**

## Key Question / Hypothesis

**What type of incentives / change management effort is needed?**
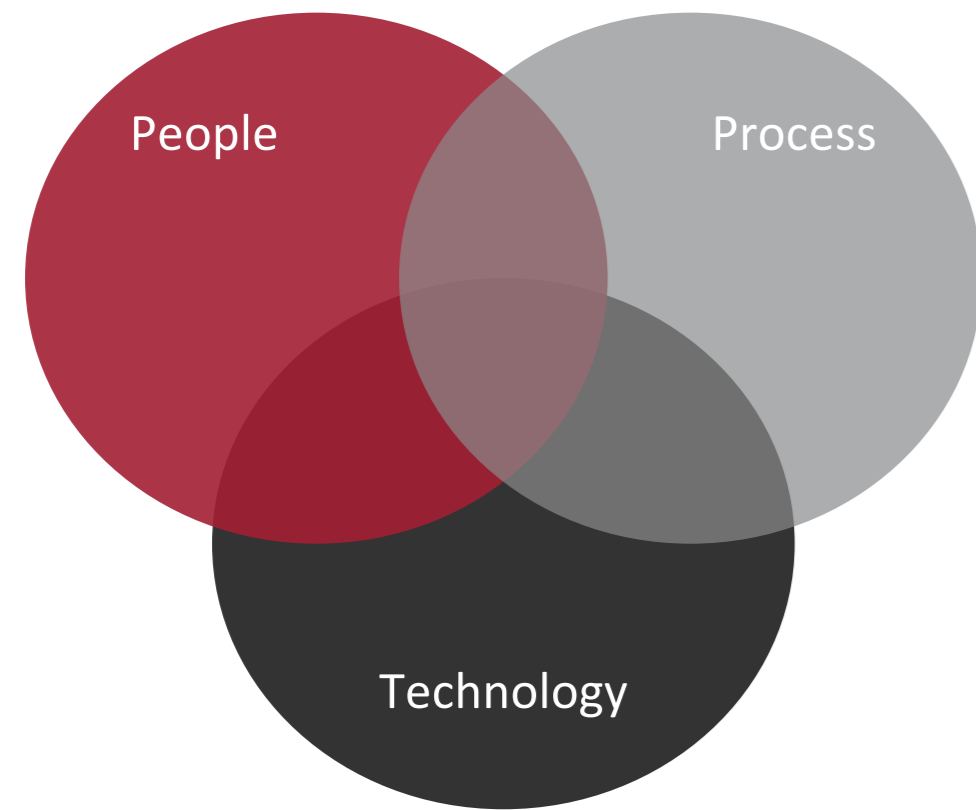
**What type of process should the food industry follow in tracing the permanence of their goods?**

People   Process   Technology

**What technologies (i.e. Blockchain?) can disrupt existing business model in the food industry?**

## Relevant Sources

- **Interviews with Industry Experts**
- **Literature Review:**
  - United Nations
  - MIT Theses
  - Theses (Other Universities)
  - Scientific Journals
  - Industry Whitepapers
  - Business Reports



## The Problem

Companies are unable to monitor their suppliers in real time due to a lack of transparency and accountability across an increasingly complex supply chain.

Moreover, today's consumers demand more transparency about where and how a product came to be**.**

## Methodology

**Literature Review:**
- Review industry and academic literatures on

**Interviews:**
- Interview relevant industry experts

**Case Studies:**
- Analyze past traceability/Blockchain case studies, the successes, and the challenges

**Synthesize:**
- Propose solution based on results

## Initial Results

**Proposed Model of Solution:**
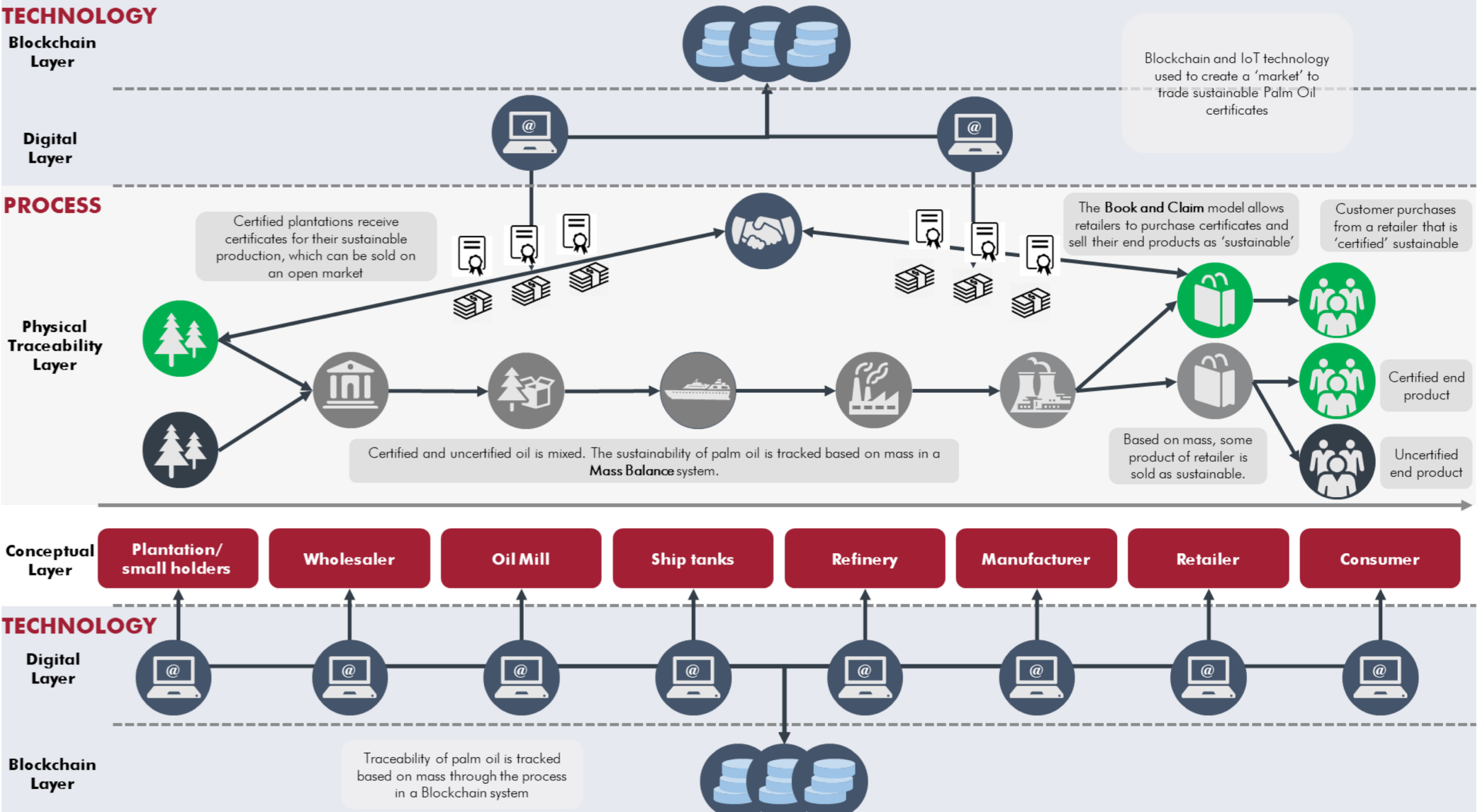


**Implementation Challenges:**
- Ownership of Implementation
- Non-voluntary participants
- Cultural and regulatory differences for participants in different regions
- Lack of current interaction among participants
- Outstanding physical/digital gap
- Technical barrier to participate (for developing countries)
- Potential limited Blockchain benefits in a corporate owned environment

## Next Steps

- Identify owner of the implementation
- Identify whether to implement from downstream to upstream or vice versa
- Find ways to scale up the RSPO certification system and introduce it to a free market
- Financial feasibility study to get industry buy in
- Develop detail incentive model

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