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Sponsor: Lazada Group

Cheaper and Better:
Improving E-commerce Product Returns Management

May 2022 Poster Session

Motivation/ Background

E-commerce Industry

1. Rapid ecommerce growth = More product returns
2. Product Returns Management (PRM) not a focus for many companies
3. Returns cost an average of 10 - 15% of online retail sales for e-commerce companies
4. Southeast Asian ecommerce firms facing cost pressure

Sponsor Company: Lazada Group
(over 130 million monthly active users)

Key Question

Key Question: How to improve product return process to reduce cost for an online retailer?

What? Challenges & Reasons behind high product returns

How? Improve existing processes and decision-making algorithm

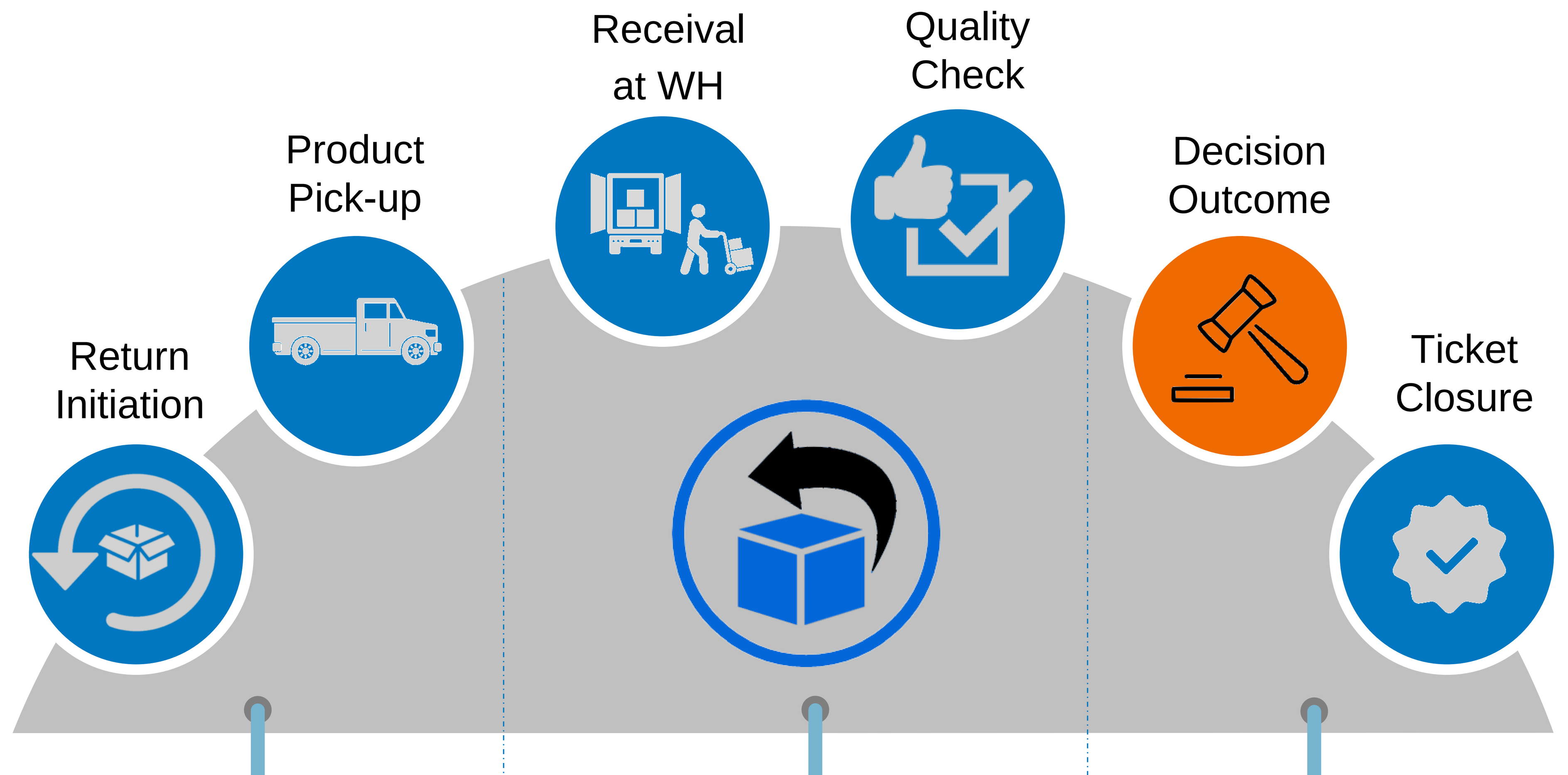
Relevant Literature

Challenges with product returns
- Robertson, Hamilton, & Jap, (2020)

Product Return Decision Tool
- Wang (2015)
- Yalabik et al. (2003)

Product Returns Policies
- Vlachos & Dekker (2002)

Cost Recovery/ Salvage Value
- Roellecke & Huchzermeier (2017)
- Seeberger et al. (2019)



Decision Nodes

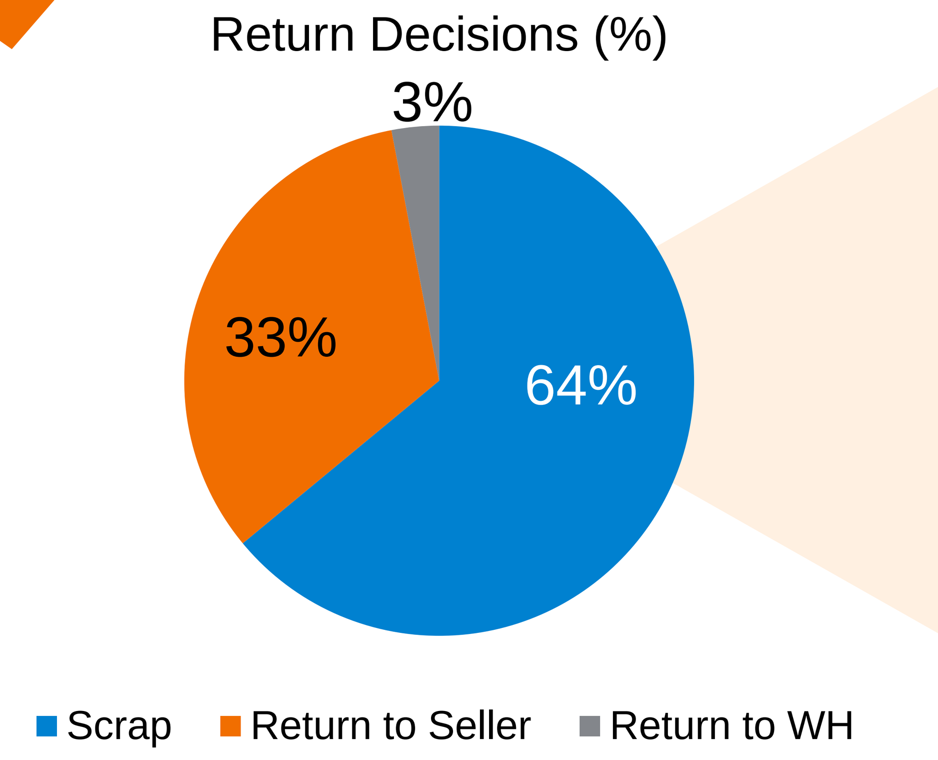
Pickup vs Drop-off 3PL1 vs 3PL2	Channel-wise Price Cutoff for QC	Decision based on QC outcome & other characteristics

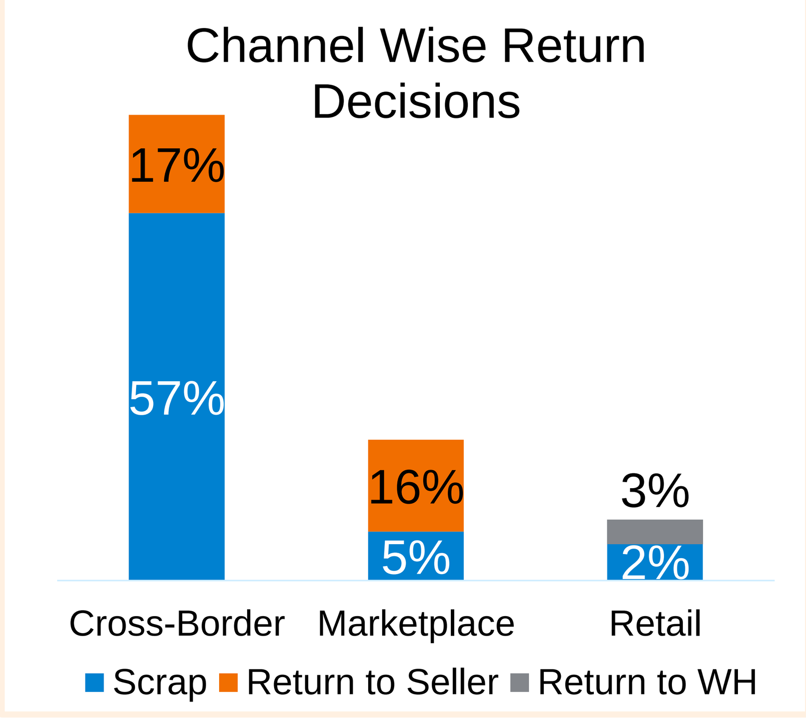
Product Returns Process

Methodology

Understanding the As-Is State	Building & Validating Model	Sensitivity Analysis & Recommendations
Interviews with Sponsoring Company; Data Collection & Analysis; Mapping the process and product flows	Building Baseline Scenario (As-Is model); Building alternative Scenarios; Cost-Benefit Analysis	Sensitivity analysis; Recommendations
Oct'21 – Dec'21	**Dec'21 – Feb'22**	**Mar'22 – Apr'22**

Data Overview (2021 returns data)





- **About 1000 items are returned every day**
- **56% of the total returns are Cross-Border returns and are scrapped**
- **Products worth ~40% of total returns value are scrapped**

Contribution

1. **Opportunity to reduce product return costs by 12% in immediate future & over 50% in long run**
2. **Developed decision support tool to analyze cost impact of various strategies**
3. **Enable data-backed strategic decision making in managing product returns**

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