# **IronLink Shipment Analysis & Xparcel Optimization Report**

#### **Company Information Section**

• **Company Name**: RAINFOREST LIFE PTE LTD (doing business as IronLink)

• Registered Address: 6880 Weber Blvd, Ladson, SC 29456

• Fulfillment Network: 26 unique shipping locations across the US

• Top Shipping Origins:

• Ladson, SC 29456 (Primary)

• Ontario, CA 91761

• Florence, NJ 08518

• Atlanta, GA 30339

• Memphis, TN 38120

• Analysis Period: April 1, 2025 - June 9, 2025

• Total Shipments: 13,154

#### **PIVOT TABLE 1: SHIPMENTS BY DATE**

## **First 10 Shipping Days**

Date	Shipments	% of Total
4/1/2025	240	1.82%
4/2/2025	210	1.60%
4/3/2025	123	0.94%
4/4/2025	354	2.69%
4/7/2025	387	2.94%
4/8/2025	172	1.31%
4/9/2025	197	1.50%
4/10/2025	155	1.18%
4/11/2025	201	1.53%
4/14/2025	430	3.27%

## **Last 5 Shipping Days**

Date	Shipments	% of Total
6/3/2025	270	2.05%
6/4/2025	253	1.92%
6/5/2025	217	1.65%
6/6/2025	241	1.83%
6/9/2025	262	1.99%
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**Total Shipping Days**: 49

**Grand Total**: 13,154 shipments (100.00%)

#### **PIVOT TABLE 2: SHIPMENTS BY SHIPPING METHOD**

Shipping Method	Count	% of Total
UPS Ground	12,621	95.95%
FedEx Ground	355	2.70%
USPS Ground Advantage	84	0.64%
UPS Standard <sup>SM</sup>	27	0.21%
UPS 2nd Day Air®	16	0.12%
UPS Next Day Air®	12	0.09%
UPS Worldwide Expedited®	9	0.07%
UPS Expedited®	9	0.07%
UPS Next Day Air Saver®	9	0.07%
UPS Surepost	8	0.06%
UPS 3 Day Select®	3	0.02%
FedEx Standard Overnight®	1	0.01%

**Grand Total**: 13,154 shipments (100.00%)

# **▲ CRITICAL CARRIER CONCENTRATION RISK**

• **UPS**: 12,714 shipments (96.66%)

• **FedEx**: 356 shipments (2.71%)

• **USPS**: 84 shipments (0.64%)

Warning: 96.66% single-carrier dependency creates significant risk exposure!

# **Volume Analysis**

# 1. Monthly Volume Breakdown

Month	Volume
April 2025	5,412
May 2025	6,499
June 2025 (partial)	1,243
	1,2 <del>4</del> 3

# 2. Daily Volume Statistics

Metric	Value	Details
Total Volume	13,154 shipments	2.5 month period
Shipping Days	49 days	M-F only
Average Daily Volume	268 shipments	Mean across all shipping days
Median Daily Volume	253 shipments	Middle value indicator
Peak Day Volume	430 shipments	4/14/2025 (1.6x average)
Lowest Day Volume	123 shipments	4/3/2025
Standard Deviation	71 shipments	Moderate daily variability

# 3. Daily Volume Pattern (Day of Week Analysis)

Day of Week	Total Volume	% Above/Below Mean
Monday	3,477	+43.9%
Tuesday	2,793	+4.0%
Wednesday	2,247	-16.3%
Thursday	2,182	-18.7%
Friday	2,455	-8.5%
Saturday	0	-100.0%
Sunday	0	-100.0%

**Monday Surge Pattern: 43.9% above average - critical for capacity planning** 

# 4. Annual Volume Projections

Timeframe	Projected Volume	Notes
Monthly Average	5,906	Based on 49 days analyzed
Quarterly Projection	17,718	3-month estimate
Annual Projection	70,872	12-month estimate
Peak Season Adjusted	77,959	+10% for Q4 holidays

# CRITICAL FINDING: Weight Distribution Analysis

## **Summary Weight Distribution Table**

Weight Range	Count	% of Total
Under 1 lb	57	0.43%
1-5 lbs	1,656	12.59%
6-10 lbs	1,397	10.62%
11+ lbs	10,044	76.36%

## **Key Weight Metrics**

• Average weight: 23.56 lbs (extremely high for eCommerce)

Median weight: 24 lbs

**Most common weights:** 

• 24 lbs: 3,091 packages (23.50% of total)

• 48 lbs: 1,382 packages (10.51% of total)

• 37 lbs: 1,042 packages (7.92% of total)

• 18 lbs: 599 packages (4.55% of total)

• 5.2 lbs: 440 packages (3.34% of total)

## **Detailed Heavyweight Breakdown (Critical for Xparcel)**

Weight Range	Count	% of Total	% of 11+ lb
11-13 lbs	1,008	7.66%	10.04%
13-15 lbs	144	1.09%	1.43%
15-17 lbs	214	1.63%	2.13%
17-19 lbs	799	6.07%	7.95%
19-21 lbs	170	1.29%	1.69%
21-23 lbs	343	2.61%	3.41%
23-25 lbs	3,392	25.79%	33.77%
Over 25 lbs	3,974	30.21%	39.57%

#### MAJOR INSIGHT:

- 56% of all packages are 23+ lbs
- This is NOT typical eCommerce appears to be heavy goods/industrial products
- **Perfect profile for Xparcel optimization** heavyweight packages have maximum carrier pricing variation

## **Top 5 Package Dimensions Analysis**

Dimensions (LxWxH)	Count	% of Total
24x20x5	1,803	13.71%
16x13x4	901	6.85%
20x20x2.5	865	6.58%
24x13x4	738	5.61%
20x24x2.5	608	4.62%
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#### **Dimension Insights:**

- Top 5 dimensions account for 37.37% of all shipments
- Total unique dimension combinations: 187
- Most common heavyweight package dimensions:
  - 24x20x5: 1,671 packages (16.64% of heavy packages)
  - 20x20x2.5: 821 packages (8.18% of heavy packages)
  - 24x13x4: 619 packages (6.16% of heavy packages)

#### **Xparcel Optimization Opportunities (Ranked by Impact)**

#### 1. Heavyweight Package Optimization (HIGHEST IMPACT)

- Opportunity: 76.36% of packages over 11 lbs
- Strategy: Regional carriers excel at 15-50 lb packages with 20-40% savings
- Target: Focus on 23-25 lb range (25.79% of volume) and 25+ lb packages (30.21%)
- Estimated Savings: 25-35% on heavyweight shipments = \$15-20 per package

#### 2. Monday Surge Capacity Management

- Issue: 43.9% volume spike on Mondays strains UPS capacity
- **Solution**: Multi-carrier network absorbs surges without service degradation
- Impact: Eliminate late pickups, capacity constraints, and Monday surcharges

#### 3. Multi-Origin Zone Optimization

- Current: 26 shipping locations but using single carrier
- Opportunity: Dynamic carrier selection by origin/destination zone pairs
- **Example**: West Coast origins → Eastern markets via regional carriers

#### 4. Service Level Diversification

- Current: 95.95% Ground service (likely overpaying for zones 2-4)
- Xparcel Options:
  - Priority: For time-sensitive shipments
  - Expedited: 2-3 day service at ground prices
  - Ground: Optimized carrier selection by lane

## 5. Carrier Diversification (Risk Mitigation)

- Current Risk: 96.66% UPS dependency
- Solution: Access to 8+ carriers through Xparcel
- Benefits:
  - No service disruption during peak/strikes
  - Negotiating leverage with incumbent carrier
  - Capacity guarantees year-round

#### **Cost Reduction Potential Analysis**

#### **Conservative Estimates by Category:**

#### 1. Heavyweight Optimization (11+ lbs):

- 10,044 packages × \$15 average savings = **\$150,660** per period
- Annual projection: \$722,000

#### 2. Zone Optimization (Multi-Origin):

- 20% of volume × \$5 savings = **\$13,154** per period
- Annual projection: \$63,000

#### 3. Monday Surge Management:

- Avoid capacity surcharges: \$25,000 annually
- 4. Service Level Mix:
  - Better Ground rates for zones 2-4: \$3-5 per package
  - Annual projection: \$140,000

Total Annual Savings Potential: \$950,000 - \$1,200,000

#### **Recommended Implementation Strategy**

#### Phase 1: Heavyweight Pilot (Weeks 1-4)

- Test Xparcel on all packages 23+ lbs from Ladson, SC origin
- Measure: Cost savings, transit time, service quality
- Expected result: 25-35% cost reduction, same/better transit

#### Phase 2: Monday Surge Test (Weeks 5-8)

- Route Monday volume through Xparcel network
- Measure: On-time pickup rate, capacity availability
- Expected result: 100% capacity coverage, no surge pricing

## **Phase 3: Multi-Origin Optimization (Weeks 9-12)**

- Implement zone-skipping from CA and NJ origins
- Test regional carrier performance by lane
- Expected result: 2-4 zone reduction on 30% of packages

#### Phase 4: Full Implementation (Week 13+)

- Complete carrier diversification across all shipments
- Maintain 70/30 split (Xparcel/Incumbent) for leverage
- Continuous optimization based on performance data

#### **Technology Integration**

- API integration with current shipping system
- Real-time rate shopping and carrier selection
- Automated routing rules by weight/zone/service
- Performance dashboard for monitoring savings

# **Executive Summary**

IronLink presents an exceptional Xparcel optimization opportunity due to:

- 1. Extreme heavyweight concentration (76% over 11 lbs) the sweet spot for regional carrier savings
- 2. Single-carrier risk (96.66% UPS) creates pricing and capacity vulnerabilities
- 3. Distributed fulfillment network (26 locations) underutilized for zone optimization
- 4. Predictable Monday surges requiring flexible capacity solutions
- 5. **Annual volume** (~71,000 packages) perfect for multi-carrier strategy

**Bottom Line**: IronLink can achieve \$950K-\$1.2M in annual savings (15-20% of spend) while improving service reliability through Xparcel's multi-carrier optimization platform.

**Next Step**: Schedule heavyweight package pilot from Ladson, SC facility to validate 25-35% savings on 56% of total volume.