

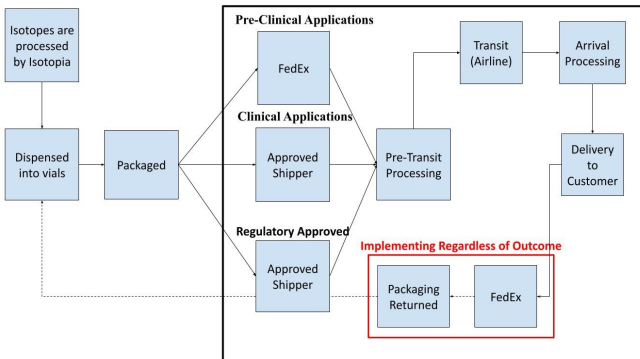
Client Background

Isotopia USA, a Westfield, IN based radiopharmaceutical company, produces two drug substances: Lutetium-177 and Technetium-161 that must be reliably and quickly delivered due to short half-lives and strict customer production schedules.

Problem Statement

Isotopia USA currently lacks a package tracking system for hardware, software, and human-machine interfaces (HMI), limiting visibility across operations. This absence of first-party tracking hinders accurate customer updates and delays carrier issue resolution.

System Model



Return on Investment

- Pre-Clinical Packages (i.e. mice studies): \$1,000 - \$10,000
- Clinical Packages (i.e. patients): \$6,000 - \$40,000
- Value in Reputation
- Value in Health of Patients

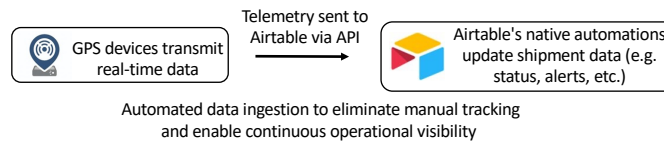
Methodologies



1. Identify stakeholder requirements and status quo
2. Research and evaluate GPS tracker vendors and solution capabilities



3. Integrate Isotopia's existing data infrastructure with selected vendor for real-time shipment visibility



4. Compare final vendor options and present recommendations

Expected Results

1. Selection of two best-fit vendors and devices
2. Implementation of real-time data integration via APIs between vendor GPS devices and Isotopia's Airtable
3. Clear justification of selection through a weighted decision matrix based on criteria such as:



- Reliable visibility
- Geofence accuracy
- Alert success
- Battery life
- Cost
- Reusability and recyclability
- Overall ease of use and customer support
- Existing analytics platform

CRITERIA	WEIGHT	Vendor A		Vendor B		Vendor C		Vendor D		Vendor E		
		RATING	TOTAL	RATING	TOTAL	RATING	TOTAL	RATING	TOTAL	RATING	TOTAL	
Location Monitoring	2	5.00	2	5.00	2	10.00	1	5.00	2	10.00	1	5.00
Geofencing	1	5.00	1	5.00	1	5.00	1	5.00	1	5.00	1	5.00
Alert Success	1	5.00	1	5.00	1	5.00	2	10.00	2	10.00	2	10.00
Location Accuracy	1	4.00	3	12.00	4	16.00	3	12.00	4	16.00	3	12.00
Real-time Cost	1	5.00	5	25.00	6	30.00	6	30.00	6	30.00	6	30.00
GPS Accuracy	1	4.00	2	8.00	2	8.00	2	8.00	2	8.00	2	8.00
Setup Fees / Month	1	5.00	5	25.00	5	25.00	5	25.00	5	25.00	5	25.00
BT	1	5.00	3	15.00	3	15.00	2	10.00	3	15.00	3	15.00
Battery Life @ 1hr Interval	1	5.00	5	25.00	5	25.00	2	10.00	6	30.00	5	25.00
Reusability	1	5.00	5	25.00	5	25.00	5	25.00	4	20.00	4	20.00
Geofencing	1	5.00	2	10.00	2	10.00	1	5.00	1	5.00	1	5.00
API Available	2	4.00	2	8.00	2	8.00	2	8.00	2	8.00	2	8.00
Customer Support	1	5.00	2	10.00	2	10.00	2	10.00	2	10.00	2	10.00
Setup	1	5.00	2	10.00	2	10.00	2	10.00	2	10.00	2	10.00
Weight	1	5.00	2	10.00	2	10.00	2	10.00	2	10.00	2	10.00
Shipping/Training	1	5.00	2	10.00	2	10.00	2	10.00	2	10.00	2	10.00
Hardware Success	1	5.00	1	5.00	1	5.00	1	5.00	1	5.00	1	5.00
Software Success	1	5.00	1	5.00	1	5.00	1	5.00	1	5.00	1	5.00
TOTAL												

Current Work

Tive Trial:

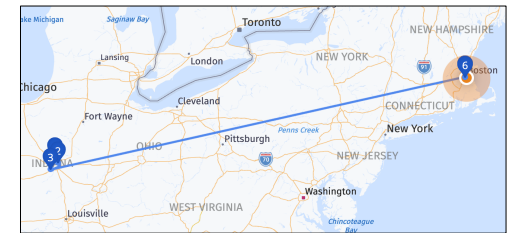
- 3 weeks total: Solo Lite (3) + Solo 5G (3)
- Sent to three clients in North America

Controlant Trial:

- 2 weeks
- 3 devices sent over the span of 3 weeks

Apple AirTag:

- Purchased but not tested due to lack of API



Future Work

Work with logistics team and Airtable/data team to implement automate processes.

- Add sections in Airtable for travel legs (provided in shipping paperwork)
- Complete data transfer API from Airtable to tracker platform/software
- Set up all geofencing and alerts
- Integrate two-sided API, so new data/information can also be transferred from trackers to Airtable
- Set up customer sharable information via Airtable and/or tracker software
- Share and integrate with Isotopia as a whole organization

Risks

Risk	Mitigation
Device lost or not returned	Label, return process, spare stock
Slow vendor support	Escalation path, backup vendor
Hardware failure	Replace units, vendor swap
Software failure	Patch, test, vendor support