WOBL 30 - Metric Improvement Guide SOP

Purpose

The purpose of this SOP is to provide operators steps to reduce WOBL30 through fact finding and key actions by process path. (WOBL stands for Work Over Block Length; WUBL stands for Work Under Block Length.) If the total working time of a Delivery Associate (DA) is above the total paid time for the DA, every minute above will be considered WOBL. Comparing a DA to a Sortation Associate (SA), WOBL is the equivalent of overtime, and WUBL is finishing early – see graphic below:
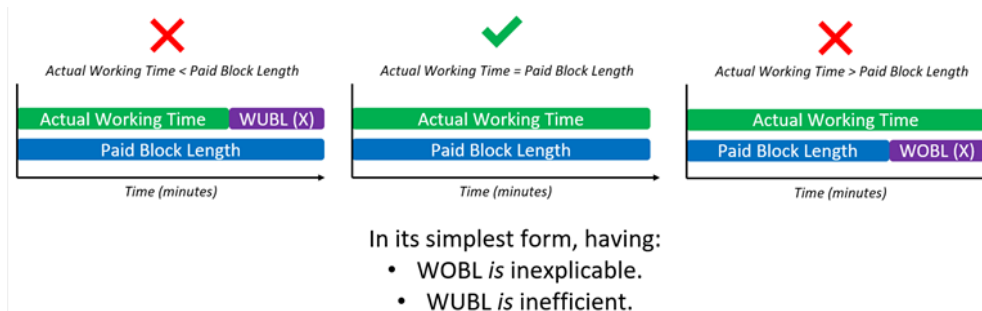

Figure 1 – WOBL Calculation

WOBL and WUBL minutes = Workday Minutes - Paid Minutes - delta (on road unknown minutes - country wise break).

Currently we have split the overtime into manageable minute buckets to help identify the size of WOBL and given each range a target:

- WOBL 0 - Target pending
- WOBL 15 - Target Pending
- WOBL 30 - ≤ 10% (Less than or equal to 10% of all routes are greater than or equal to 30 minutes over the Paid Block Length)
- WOBL 60 - ≤ 4% (≤ 4% of all routes are ≥ 60 minutes over the Paid Block Length)
- WOBL 90 - ≤ 0% (≤ 0% of all routes are ≥ 90 minutes over the Paid Block Length)
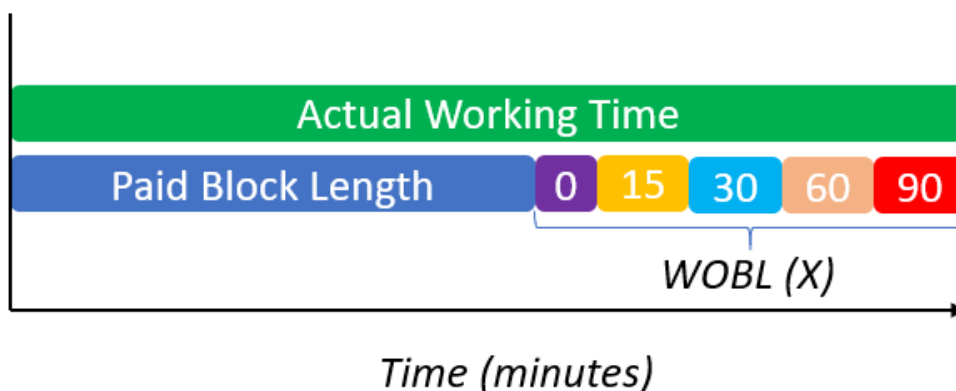

Figure 2 – WOBL over block length

The best sources for deep diving WOBL30 are the **WOBL30 PerfectMile dashboards ([NA](NA), [EU](EU))**, which provide granular detail.

Scope

This SOP is part of the On-Road Area Manager's (NA)/Shift Manager's (EU) standard work to address WOBL30 on a weekly basis if their site does not meet AMZL's WOBL30 Goal. The AM/SM provides WOBL30 bridging information one evening a week, typically on the overlap days between Front Half (FH)/ Back Half (BH) and assigns action items to OTR & UTR leadership teams from the deep dive.

WOBL30 impacts the business in multiple ways:

Excessive and/or inequitable DA Workload is not a new problem, but the pace at which Amazon Last Mile is growing makes it one of our top priorities for the coming years.

When thinking short term, trying to cap or reduce DA workload (whether it is in terms of time or effort, as described above) is not a good idea, as it almost always results in routes with a lower SPR/DPPH, hence with increased delivery costs.

However, this is a short-sighted argumentation, as not trying to preserve DA Workload comes with medium-to-long-term risks on

1. DA Safety: DAs can feel pressured to cut corners and break safety rules if they are rushed by time. Repeated deliveries with high load/walk distances/etc can also have long term consequences on their health.
2. PR Escalations: DAs repeatedly undergoing high workload can trigger public escalations that have negative consequences on Amazon's image.
3. DA Attrition: DAs leaving generates additional cost to Amazon. It's estimated that onboarding a new DA is costing more than $3,000 when screening, background checks, advertising, interviewing and training are included, and the cost of attrition (all root causes blended) can be counted in hundreds of million dollars per year.
4. DA Hiring: Not being able to find DAs that are willing to work for us can become a bottleneck, in some regions, for Amazon growth.

Although some of those risks are difficult to measure and to compare to the tangible costs of DPPH degradation, they show why DA Workload has taken a central importance Amazon's Last Mile delivery strategy over the recent years

Key Definitions

- Pre-Route Offsite: Time spent before entering the yard of the station. It contains the activities done at the offsite parking location when DA are taking their van, the travel time from the offsite parking location to the station, and more generally any DSP/DA activity done outside of the station before the start of the day.
- Holding: Time spent in the holding area. It mainly covers wait time before DAs enter the loading area, but could also represent activities done in parallel during this wait time.
- LAT: Time spent in loading area, loading vehicle and waiting for the wave to depart the station.
- Post-LAT: Time spent right after loading area, but before departing the station. In theory, we expect this time to be at 0, hence the Plan vs. Actual for that bucket is always negative or null.
- On Road Main Route First Attempt: Time spent on road (stem + on zone) delivering packages from the

main route the DA contributed to. We compare this actual time to the paid on road time to get the Paid vs Actual (Plan vs. Actual).

- Main Route Redelivery: On Zone time spent by the DA reattempting packages from the main route they contributed to. Since, in theory, we don't plan for redelivery, the corresponding paid time is set to 0 and this Plan vs. Actual bucket is always negative or null. This is also a useful convention to look at the overall Paid vs Actual for on road main route: by summing Plan vs. Actual for on road main route first attempt + main route redelivery, we get a Paid vs Actual vision of the main route the DA contributed to.
- Rescue: On Zone Time spent by the DA delivering packages from routes of rank > 1 (i.e. not the main route). Since, in theory, we don't plan for the DA to contribute to other routes, the corresponding paid time is set to 0 and this Plan vs. Actual bucket is always negative or null. This is also a useful convention to look at the Paid vs Actual for on road overall: by summing Plan vs. Actual for on road main route first attempt + main route redelivery + rescue, we get a Paid vs Actual vision of the global on road activity.
- Post-Route: Time spent on post-route activities (RTS, post-trip DVIC, offsite post-route travel time).

Measurement Methodologies

| Metric	Standard	Definition	Formula	Historical Performance Link	Hourly Performance Link
WOBL30	<10%	Work Over Block Length 30 (WOBL30) Driver % measures the total percentage of Delivery Associates or Delivery Partners that worked 30 minutes longer than their scheduled block length.	WOBL minutes = Workday Minutes - Paid Minutes	NA Dashboard (Amzlbiaquicksight) EU Dashboard (Amzlbiaquicksight) NA PerfectMile EU PerfectMile	N/A

Roles and Responsibilities

Role	Responsible, Accountable, Consulted, Informed (RACI)	Responsibility
OTR Area/Shift Manager (L4/5)	R	Responsible for reviewing WOBL metric at a regular cadence and ensuring all issues are resolved

OTR Ops Manager (L6)	A	Accountable for reviewing WOBL metric at a regular cadence and ensuring all issues are resolved

Safety, Tools, Equipment, Software Needed

1. NA PerfectMile Dashboard
2. EU PerfectMile Dashboard
3. WOBL Wiki
4. WOBL Quicksight Wiki
5. WOBL Broadcast
6. WOBL SIM

Process Map
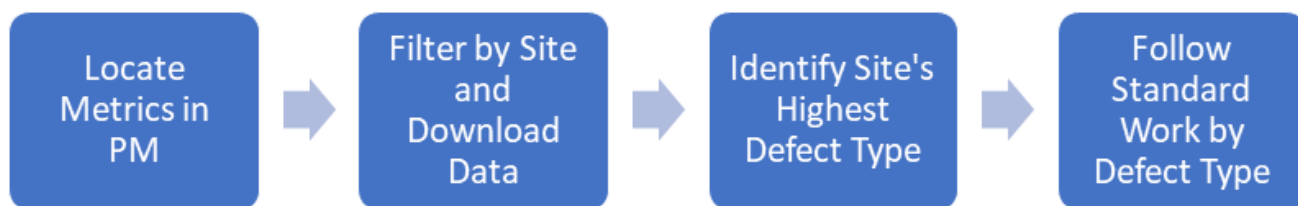
Process Map

Process Step(s)	Image(s)
1. Navigate to PerfectMile Dashboard Access your region's dashboard: • NA Dashboard • EU Dashboard	 *Figure 3 - PerfectMile Dashboard*

2. WOBL (Plan vs. Actual) buckets

WoBL has 9 categorical metrics. Each metric is measured by Planned vs Actual logic, in which the delta between the planned metric standard is compared to actual metric execution. In some cases, the planned metric standard is 0 and in others the planned standard varies by region, DS type, DSP, etc.

Below are the 9 categorical metrics that feed into WoBL:

1. Plan vs. Actual Pre-Route Offsite Minutes
2. Plan vs. Actual Holding Minutes
3. Plan vs. Actual Loadout Area Turnover (LAT) Minutes
4. Plan vs. Actual Post LAT Minutes
5. Plan vs. Actual Main Route First Attempt Minutes
6. Plan vs. Actual Main Route Redelivery Minutes
7. Plan vs. Actual Rescue Minutes
8. Plan vs. Actual Post Route Minutes
9. Plan vs. Actual Unmapped Minutes

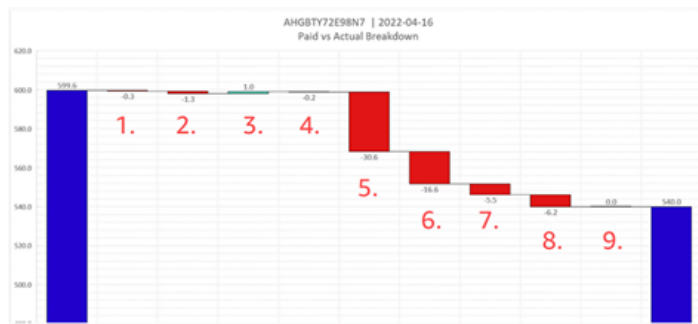These metrics are ordered sequentially for a driver's workday.

Figure 4 – Paid vs Actual Breakdown

3. Filter by site and download data

Under drilldowns, please select the station that will be used for deep diving.

4. Identify Site's Top Defect Types

Identify which defect types most contribute to your site's WOBL30.

5. Follow Standard Work Based on Highest Defect Type

Follow the appropriate standard work below

(Root Cause Identification Steps) based on your site's highest defect type. Solutions to address root causes are split out by process paths.

Root Cause Identification Steps Based on the Above 9 Categorical Metrics

| Steps |
| --- |
| **Root Cause 1: Pre-Route Offsite**

Metric: Plan vs. Actual PreRoute Offsite Minutes = Planned PreRoute Offsite Minutes – Actual PreRoute Offsite Minutes

Standard (EU and NA): Plan vs. Actual Pre-Route Offsite Minutes = 0

Plan vs. Actual Pre-Route OffSite Minutes captures the total amount of time for "pre-route activities." Pre-Route Offsite minutes are captured from the time of driver's "Start Workday" rabbit application punch until beacon arrival. Pre-Route Offsite activities differ by Region. In NA, pre-route activities include DVIC, DSP Start Up Meeting (SUM), and any other activity until the driver arrives for holding. In EU, activities do not include DVIC or DSP SUM in Pre-Route.

· [Rabbit app SIM](#)

· [Site Services SIM](#)

· [Early Login Standard Operating Procedures](#)

· [DSP Offsite Parking – Alchemy Link](#) |
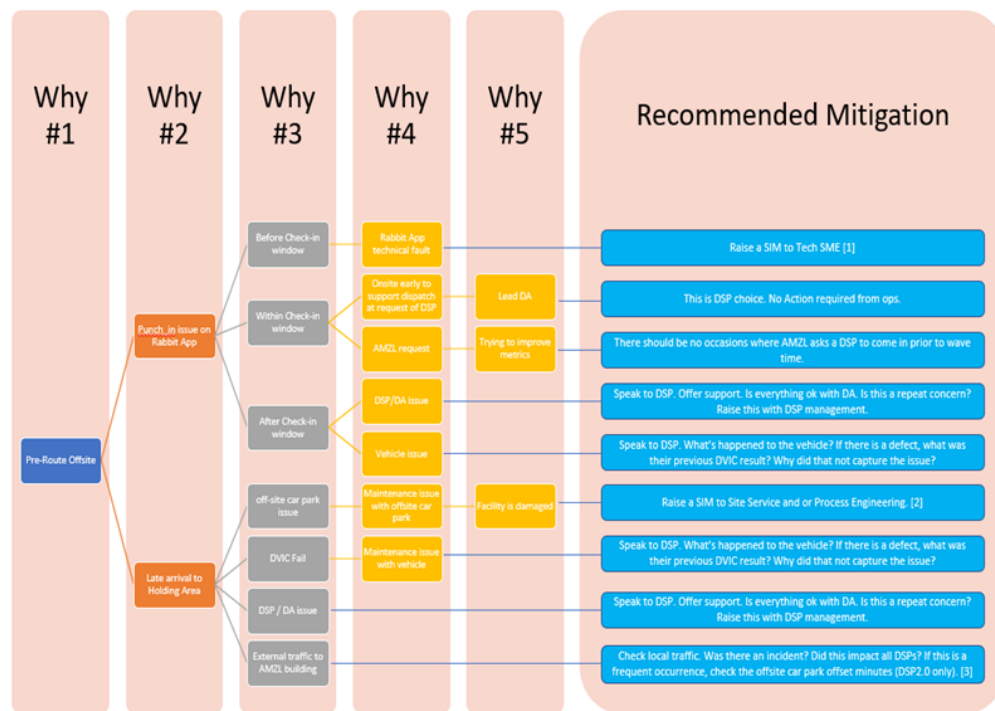
Figure 5 - Pre-Route Offsite

Root Cause 2: Holding

Metric: Plan vs. Actual Holding Minutes = Planned Holding Minutes – Actual Holding Minutes

NA Standard: Plan vs. Actual Holding = 10 minutes

EU Standard: Plan vs. Actual Holding = 9.5 minutes with SUM; 6.5 minutes without SUM

Plan vs. Actual Holding minutes is the delta between planned holding minutes and actual holding minutes. Plan vs. Actual holding minutes capture the total amount of time a driver is spending during the holding period of dispatch, from beacon arrival to beacon entrance. Holding period activities occur after the DA arrives onsite but before the DA enters the launchpad. In EU, holding activities include Delivery DSP SUM and DVIC, along with queuing and holding.

1. Holding Area Time SOP
2. RIVER SIM
3. All In All Out Dispatch
4. Line Row Dispatch Process Standard Operating Procedures
5. Bluetooth Beacon Installation Standard Operating Procedures
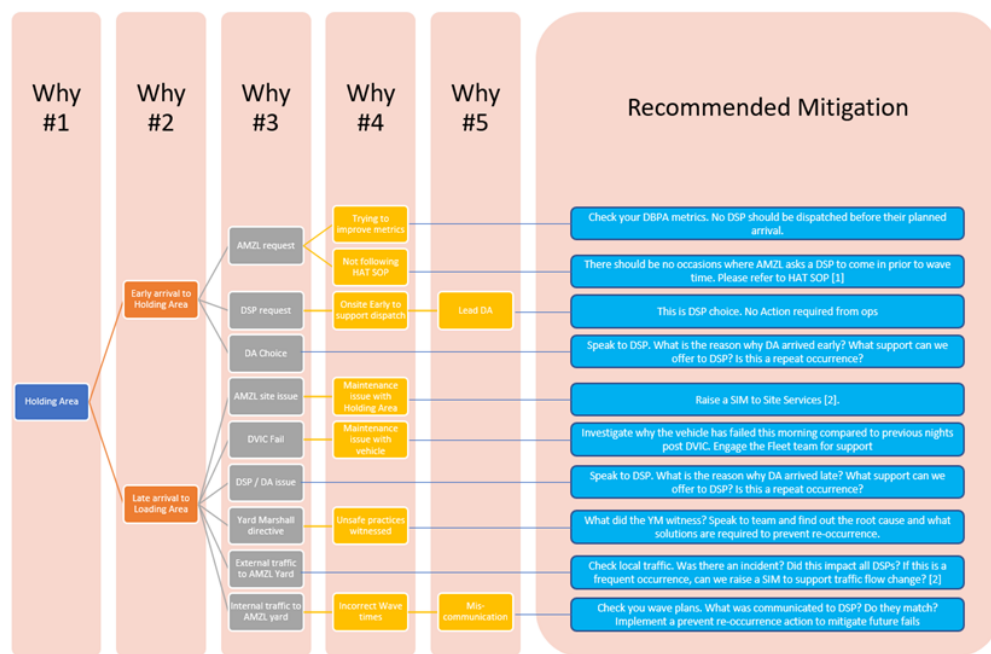6. On Road Daily Routines SOP

Figure 6 - Holding

Root Cause 3: Loading Area Time

Metric: LAT = Planned LAT – Actual LAT

NA Standard: LAT = 0 minutes (may vary)

EU Standard: LAT = 15 minutes (may vary)

Plan vs. Actual LAT Minutes is the delta between Planned LAT and Actual LAT performance by the driver. LAT is captured from Beacon start to Beacon End, or from the beginning of entering the loading area to leaving. LAT time expectations may vary according to region, DS, and DSP (e.g., EU LAT = 12 minutes; Legacy NA LAT = 30 minutes.)

LAT is measured by beacon devices that are installed in the entrance and exit locations of the loadout area. The beacon devices track the DA's entrance and exit times using Bluetooth sensors installed around the station.

Poor LAT performance accounts for additional time lost to a driver's block length.

1. Holding Area SOP
2. RIVER Sim
3. Service Type Compliance Wiki
4. Monthly LAT SOP
5. All In All Out Dispatch
6. Bluetooth Beacon Installation Standard Operating Procedures
7. Line Row Dispatch Process Standard Operating Procedures
8. Van Loading Standard Operating Procedures (*Cultural Assessment* (CA))
9. Van Loading Standard Operating Procedures – *Step* Van
10. Van Loading Standard Operating Procedures – Armada Sprinter

11. [Van Loading Standard Operating Procedures – Vans Without Shelves](#)
12. [Delivery Associate Assist with Van Loading](#)
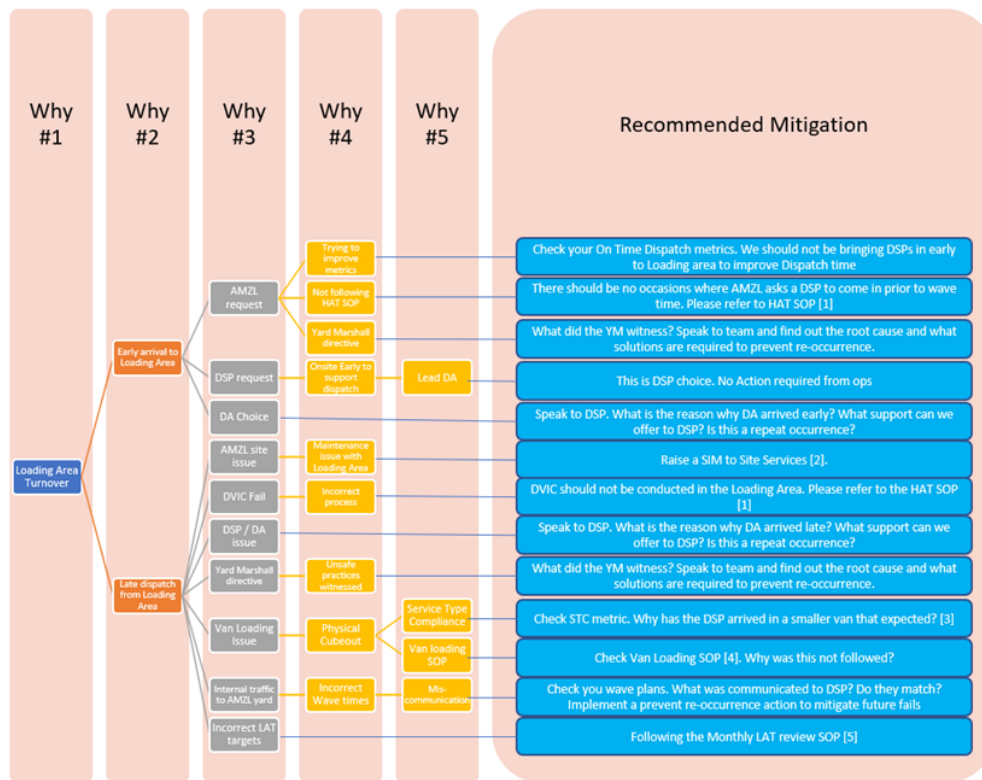13. [Delivery Associate Assist Calculator](#)

Figure 7 - Loading Area Time

Root Cause 4: Post LAT

Metric: Plan vs. Actual Post LAT Minutes = 0 – Actual Post LAT Minutes

Standard (NA/EU): Plan vs. Actual Post LAT = 0

Plan vs. Actual Post LAT minutes captures any occurrence in which a driver had minutes post LAT greater than planned post LAT, in which planned post LAT expectation is 0. Plan vs. Actual Post LAT minutes measures total amount of time beacon exit and departure beacon of DS premises. Specifically, when the DA departs the launchpad but does not depart the site, they are accumulating Post LAT minutes.

1. [RIVER](#)
2. [Geo-Fence code issues](#) / [FAQ 2.6](#)
3. [All In All Out Dispatch](#)
4. [Bluetooth Beacon Installation Standard Operating Procedures](#)
5. [Line Row Dispatch Process Standard Operating Procedures](#)
6. [Van Loading Standard Operating Procedures (*Cultural Assessment* (CA))](#)
7. [Van Loading Standard Operating Procedures – *Step* Van](#)
8. [Van Loading Standard Operating Procedures – Armada Sprinter](#)
9. [Van Loading Standard Operating Procedures – Vans Without Shelves](#)
10. [Delivery Associate Assist with Van Loading](#)
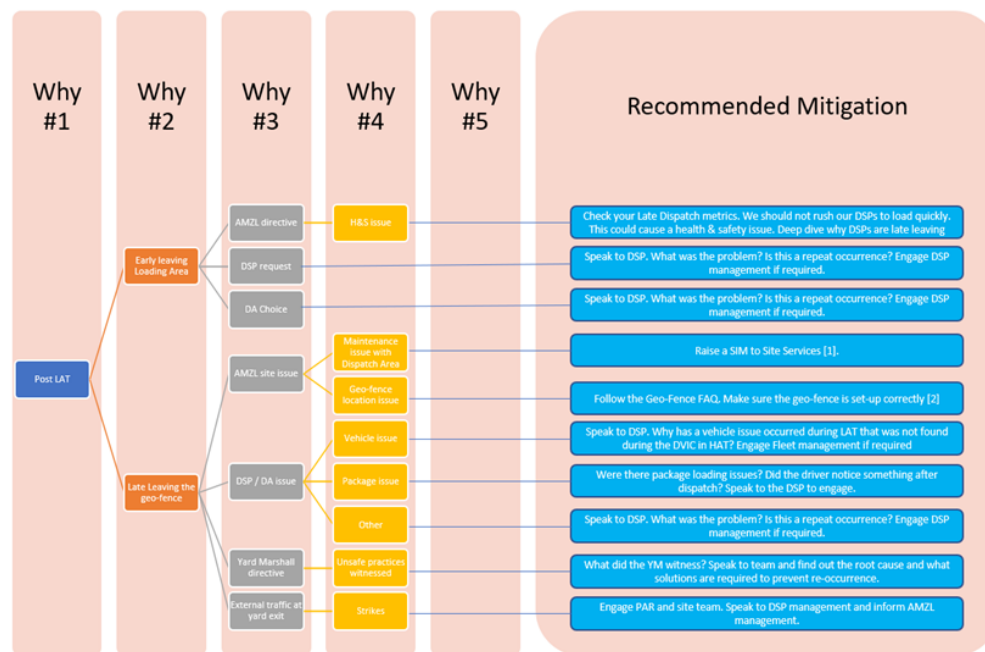11. [Delivery Associate Assist Calculator](#)

Figure 8 - Post LAT

Root Cause 5: On Road Main Route First Attempt

Metric:

Standard (NA/EU): Plan vs. Actual On Road Main Route First Attempt Minutes = 0

Plan vs. Actual On Road Main Route First Attempt Minutes is the delta between planned total on road minutes compared to actual on road minutes, focusing on total time excluded of redelivery, split, rescue, and any potential additional minutes not planned. In theory, DAs should execute only one route and successfully deliver on their first attempt. Plan vs. Actual On Road Main Route First Attempt Minutes is captured from On Road Start to On Road End signals. Planned Main Route First Attempt Minutes should equal actual main route first attempt minutes.

1. DA tenure QS
2. RIVER SIM
3. Van loading SOP
4. RIVER SIM / Delivery Failure SOP
5. Dispatch Failure SOP
6. No Package Left Behind Decision Tree
7. AMZL Delivery *Standard Operating Procedures*
8. Package Seek Improvement Standard Operating Procedures
9. Package Seek Improvement DSP 1.0 Standard Operating Procedures
10. Grouped Stop Standard Operating Procedures
11. Walking To and From Delivery Stop
12. Sticky Routing – Delivery Associate Affinity
13. Package Search Dashboard
14. Route Diver
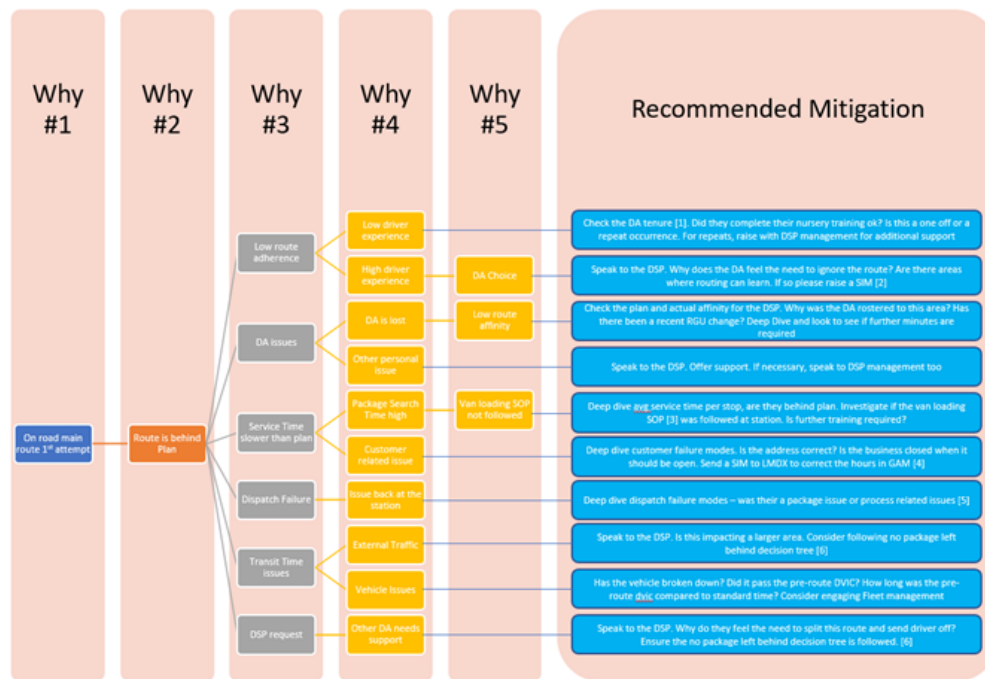15. Repeat ROBL QS*(login: amazonbi)*

16. [ROBL Wiki](#)

Figure 9 - On Road Main Route First Attempt

Root Cause 6: Main Route Re-delivery

Metric: Plan vs. Actual Main Route Redelivery Minutes = 0 – Actual minutes during redelivery

Standard (NA/EU): Plan vs. Actual Main Route Redelivery = 0

Plan vs. Actual Main Route Redelivery minutes captures the total amount of time in which the driver had redelivery minutes greater than WoBL minutes specific to the DA that worked xx minutes or more over their planned block length. Redelivery minutes represents total accumulated minutes corresponding to the redelivery activity.

1. [Delivery Failure SOP](#)
2. [RIVER](#)
3. [Dispatch Failure SOP](#)
4. [Driver Delivery Standard Process *Standard Operating Procedures*](#)
5. [Reattempting Packages Missing Standard Operating Procedures](#)
6. [WoBL Redelivery Deep Dive Standard Operating Procedures](#)
7. [Redelivery Dashboard](#) (*Europe* (EU) Only)
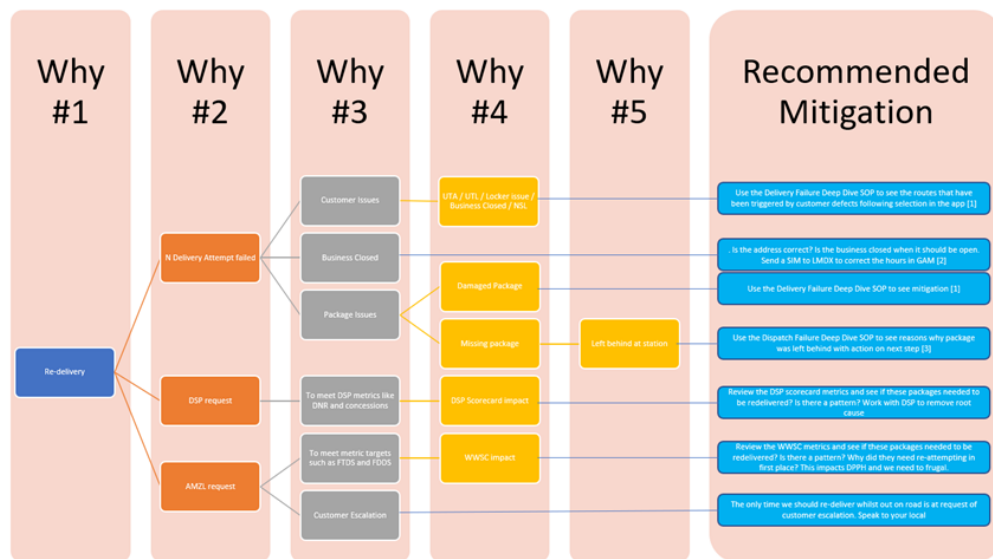8. [Redelivery standard workflow](#)

Figure 10 - Main Route Re-delivery

Root Cause 7: Rescue

Metric: Plan vs. Actual Rescue minutes = 0 – Actual rescue minutes

Standard (NA/EU): Plan vs. Actual Rescue minutes = 0

Plan vs. Actual Rescue Minutes is the measure of planned rescue minutes compared to total rescue minutes, specific to the DA that worked xx minutes or more over their planned block length. Because DAs are expected to execute only one route per day, rescues are to be treated as a defect.

1. Unplanned SOP
2. No Package Left Behind Decision Trees
3. Rescue Standard Work – Rescuee *Standard Operating Procedures*
4. Rescue Standard Work – Rescuer Standard Operating Procedures
5. Rescue Standard Work Guide PPT
6. Delivery Associate Schedule Enforcement Creating a Rescue Block DSP Initiated Standard Operating Procedures
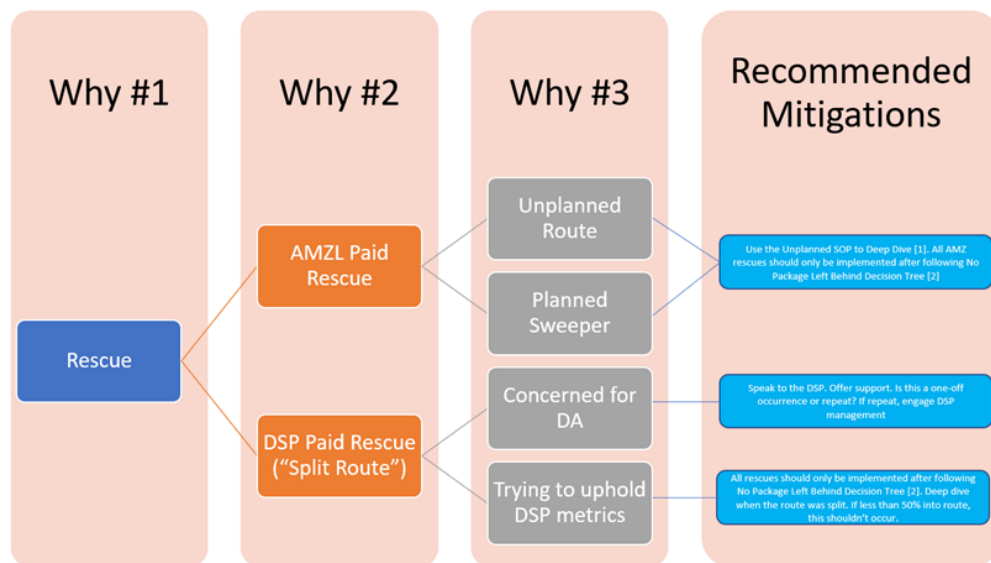7. DSP Adhoc Recycle Process Standard Operating Procedures

Figure 11 - Rescue

Root Cause 8: Post Route

Metric:

Standard:

Plan vs. Actual Post-Route Minutes is the measure of time planned for post route activities compared to actual. Post Route activities include RTS, DVIC, and off-site parking. Post Route minutes are captured from signals from On Road End to Flex "Rabbit" End Punch. Planned Post Route Minute standard varies by DSP and by site (depending on distance to and from site for off-Site parking). In general, Post-Route minutes standard excluding off-Site parking = 15 mins.

1. SIM link
2. Dispatch Failure SOP
3. RTS *Operations* (OPS) Debrief
4. RTS Pit Stop Debrief
5. Delivery Associate Debrief *Standard Operating Procedures*'
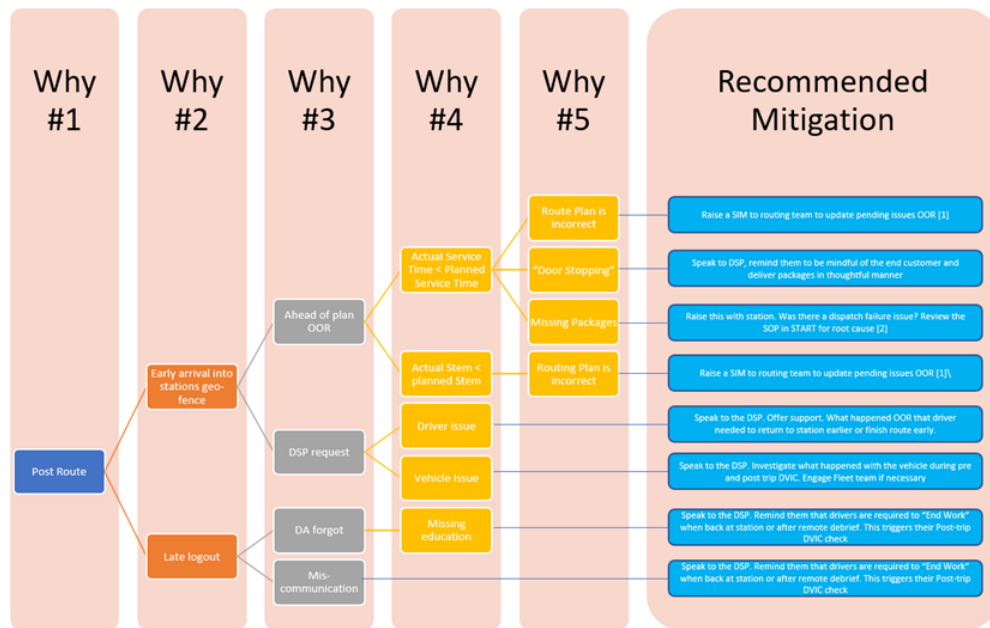6. DVIC Standard Operating Procedures

Figure 12 - Post Route

Root Cause 9: Plan vs. Actual Unmapped Minutes

Metric:

Standard (NA/EU): Plan vs. Actual Unmapped Minutes = 0

Even though we are able to compute the actual start and end time of the DA, there are cases where we miss intermediary signals (e.g., beacon data missing) while we have punch start and on road start times. In those cases, we record actual time that we are be able to "map" to a specific activity/bucket (still using the same example: we are not able to classify the entire time between punch start and on road start into distinct pre-route offsite, holding, LAT times).

In such cases, we flag this time as "unmapped", and we also put the corresponding paid time in an "unmapped" bucket. The difference between the two gives us the unmapped Plan vs. Actual.

Plan vs. Actual Unmapped Minutes captures any occurrence in which a driver had unmapped minutes greater than WoBL minutes specific to DA that worked XX minutes or more over their planned block length. Unmapped minutes represents total accumulated minutes corresponding that is unable able to mapped to a specific activity.

1. [SIM](#)
2. [SIM](#)
3. [Unhealthy Beacons](#)
4. [Beacon SOP](#)
5. [Station tech SIM](#)
6. [Airplane Mode](#)
7. [Beacon Quicksight](#)

8. [Actual Time Measurement Wiki](#)

Figure 13 - Unmapped

Frequently Asked Questions (FAQs)

FAQ 1: What is the difference between WOBL and ROBL?

ROBL is at route level and only captures on-road time (Stem in, on-zone, stem out). WOBL works at driver level and captures the total workday, including UTR (off-site parking, DVIC, holding, LAT, RTS) and OTR activity.

FAQ 2: What are the current targets for WOBL?

The current targets for WOBL are:

- WOBL0: TBD
- WOBL15: TBD
- WOBL30: 10% of all routes
- WOBL60: 5% of all routes
- WOBL90: 0% of all routes

FAQ 3: Why is redelivery time part of the root-causes despite having removed redelivery as a service type?

The re-delivery time can still be within the route despite the removal of re-delivery routes. This would be the bucket where the DA doesn't split the route and spends X amount of time re-delivering, more details can be seen in the [Routing Estimation Plan vs. Actual Wiki](#).

FAQ 4: Why don't we calculate WOBL based on DVIC time stamps, as drivers might log in early just to inspect their assigned route when they are not yet on duty?

DVIC is currently not available broadly across all DAs and not always accurate. When available, DVIC timestamps could also be used as one of the main signals for driver working hours, since we expect DVIC to be the first and last activity during the day but currently we are still using driver login/logout timestamps.

FAQ 5: How does Bluetooth impact WOBL?

We use Bluetooth signals between a DA's device and the UTR beacons to establish time signatures recording when a DA entered and exited various points at a DS. These timestamps are used to calculate the Actual time in WOBL. When Bluetooth is not working, our categorical metrics such as HAT and LAT will not be able to pick-up a time signature which causes that time to become "Unmapped". Bluetooth is a key part of our data in to ensure we have the best chance of solving why our DA's go over their block length.

FAQ 6: When does a device become full once in airplane mode?

This varies depending on device. Typically, a device cache memory will become full after 4 hours of being on airplane mode and therefore not store any more delivery information. Once the device is taken off airplane mode, the missing information will not be uploaded to the cloud and therefore the AMZL systems will not be able to learn.

FAQ 7: How does non-complaint Rabbit app usage impact WOBL?

We use the Rabbit application to trigger our Start and End work for DA's. The Rabbit app is also used in conjunction with Bluetooth to record the in station time stamps with Beacons. Finally, the rabbit app is used on road to track our deliveries. If there is no signal leaving (rabbit ping) leaving the device out on road, AMZL had no way of knowing when a route has issues or if the driver is ahead or behind plan. This data is crucial to creating reliable, consistent and achievable workload for our DAs