

# Issue 150 - Jan & Feb 2024

## Ticketing & Revenue Update

The TRU is 150 issues old! - see what we've covered in over 18 years - Pages 10 & 11

Did we achieve all that we intended in 2023? - our year end review is on Pages 8 & 9

Its that time of year again! Freedom Pass reissues have already started - Page 6

New PIN Entry Devices - Page 16, New Oyster card readers, and Old Luggage Chutes - Page 17

The Railway Children Charity are having another big sleep out! - Details are on page 7

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Barcode Tickets, POM Reduction, FEDs, POM and Gate Upgrades

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Revenue Inspection Device update

## INTRODUCTION

Welcome to another landmark edition of the Ticketing & Revenue Update, with our 150<sup>th</sup> edition since it was launched to update station and revenue control colleagues with everything that is going on, or planned within the area of ticketing, revenue control and fare collection.

To celebrate this latest landmark, we have included a Special Feature on Pages 10 + 11 where we look back over some of the headline stories, we have covered over more than 18 years. Unfortunately, space doesn't allow us to include everything and there are many other innovations or changes that we possibly have not mentioned. However, it does give a bit of a taster of some of the things we had covered in lead articles and also includes a couple of topics that we are revisiting this month.

As in many of our previous editions of TRU, if we had a lead article this month, it would almost certainly be around the late confirmation of the main fares revision in March and the amount by which fares will be changing. More information on that appears on Page 3 (opposite).



## DECEMBER FARES REVISION FIXES

Further to our review of the December Fares Revision in TRU149, two issues that were identified after implementation were successfully fixed by Cubic as part of the first base data update of the year on Sunday 07 January.

The main issue saw the restoration of the ability for customers to purchase tickets to Heathrow via the Elizabeth line on our POMs. This had been identified during the final testing undertaken, but unfortunately too late to be able to fix the issue before the actual fares revision. This issue had also been highlighted to us by staff at several stations served by or close to the Elizabeth line.



This occurred due to the single fare from most LU sites (£15.20) being the same price as a Day Travelcard.

The best value option should have therefore offered the Day Travelcard but failed to do so and prevented the customer being able to buy the Single ticket they wanted. POMs now display all of the fare options available again.

The second issue affected customers trying to buy Boundary zone extensions to certain GWR stations. Following the December changes these were not available on POMs and an incorrect message was displayed to customers.





# MARCH FARES REVISION PREVIEW

The next fares revision has been confirmed as Sunday 03 March, although the late confirmation of the date has meant that the ability to change items has been very much restricted by the amount of time available.



The main headline regarding 2024 fares, when announced on Friday 19 January, was that fares set by TfL will be frozen.



### Frozen or not?

There will be no change to the cost of bus journeys, LU Single and Return tickets and PAYG journeys on LU and other TfL operated rail services.

The cost of Travelcards including Day Travelcards will increase, as the pricing of these are set jointly by TfL and the Train Operators.

Travelcards will rise by an average of 4.9% following the increases announced for NR customers just before Christmas. Day Travelcards issued from NR stations outside the zones will rise by a further 3% due to a levy imposed as part of the recent renegotiation of revenue apportionment on these tickets. Fares for wholly NR tickets and through tickets from LU to NR stations outside the zones will increase due to the fares increases implemented by the relevant TOCs.

Product	Status	Product	Status	Product	Status
LU Single	FROZEN	PAYG Daily Cap	INCREASE	Bus Fare	FROZEN
LU PAYG Fare	FROZEN	Travelcard Season	INCREASE	PAYG Bus Cap	FROZEN
Day Travelcard	INCREASE	PAYG Weekly Cap	INCREASE	Bus Pass Season	FROZEN
March Fares Revision table				PAYG Weekly Bus Cap	FROZEN

Other changes which are due to be implemented as part of the march fares Revision are:

- Increase in the POM maximum transaction limit for bankcard transactions, from £900 to £1200 to take account of planned increases to ticket prices (mainly for sales in stations in Zones 7-9).
- A fix for an issue affecting customers with Family Railcards attempting to buy discounted tickets
- A solution to non-acceptance of NR tickets from Elizabeth line stations to the east of London at Moorgate and Liverpool Street
- Change to gate settings at Highbury & Islington to designate this as a Cross London station, to allow gates to accept NR point to point tickets with a destination of Highbury.

# PROJECT OVAL DELAYED

The planned implementation of the first phase of Project Oval (initially delayed from 03 December until later that month), has now been postponed until Summer 2024 at the earliest.

It is still hoped that the first 53 stations will be added to those already allowing customers to use contactless payment to pay for their PAYG journeys on NR in June. A further phase of the project is planned to add more stations by the end of 2024. But watch this space, as installation work and fares data for the next batch of sites will need to be completed.

One of the main drivers for the additional fares revision in December 2023, was to provide fares data for the first batch of stations which were due to accept PAYG on contactless as part of Phase I of the project. It also implemented a number of changes to NR fares to align Single fares with the proposed PAYG charges being implemented.

A side effect of this is that there are now a number of fares on POMs, where the fare to a particular station, may now be higher than that offered to a station a number of stops further down the line. This can be a bit confusing to customers but is another complexity to the ticketing system caused by certain changes not being implemented as expected.

## PENALTY FARE INCREASE

Apart from the announcement of a freeze on TfL fares, the mayor's announcement on Friday 19 January also included the announcement of an increase in the TfL Penalty fare from £80 to £100 with effect from Sunday 03 March.

This will be the first increase in the Penalty Fare since 2011.

### £100 penalty fare or prosecution

if you pass this point and fail to show on demand a ticket, validated smartcard or other travel authority valid for the whole of your journey



The increase will bring us back into line with NR train operators who increased their Penalty fare to £100 on 23 January 2023.

The change will require replacement of all stickers and signage that carries the current amount of £80, but the amount was greatly reduced by the previous decision to not include the actual amount of the Penalty on stickers on our gates and a majority of the signage on our trains.

As a result the new amount will only need to be displayed on a couple of notices in each tube carriage and on a sign in each ticket hall.

It is obviously hoped that the higher Penalty fare change will help reduce the current level of fare evasion on the network.

#### LU Penalty Fare timeline

Introduced 1994	12 Jun 2005	11 Jan 2009	02 Jan 2012	03 Mar 2024
£10	£20	£50	£80	£100

## CHEAPER FARES ON A FRIDAY?

A week after the Mayor's official announcement regarding the March Fares increases, there was a further announcement, this time regarding a planned trial of 'Off Peak' fares being charged all day on a number of Fridays between Friday 08 March and the end of May.

Despite hybrid working, ridership on most days is now back to pre-COVID levels, except for Fridays where it is much lower. City Hall, London-based organisations and the leisure and hospitality industry are all keen to attract commuters into London on Fridays.

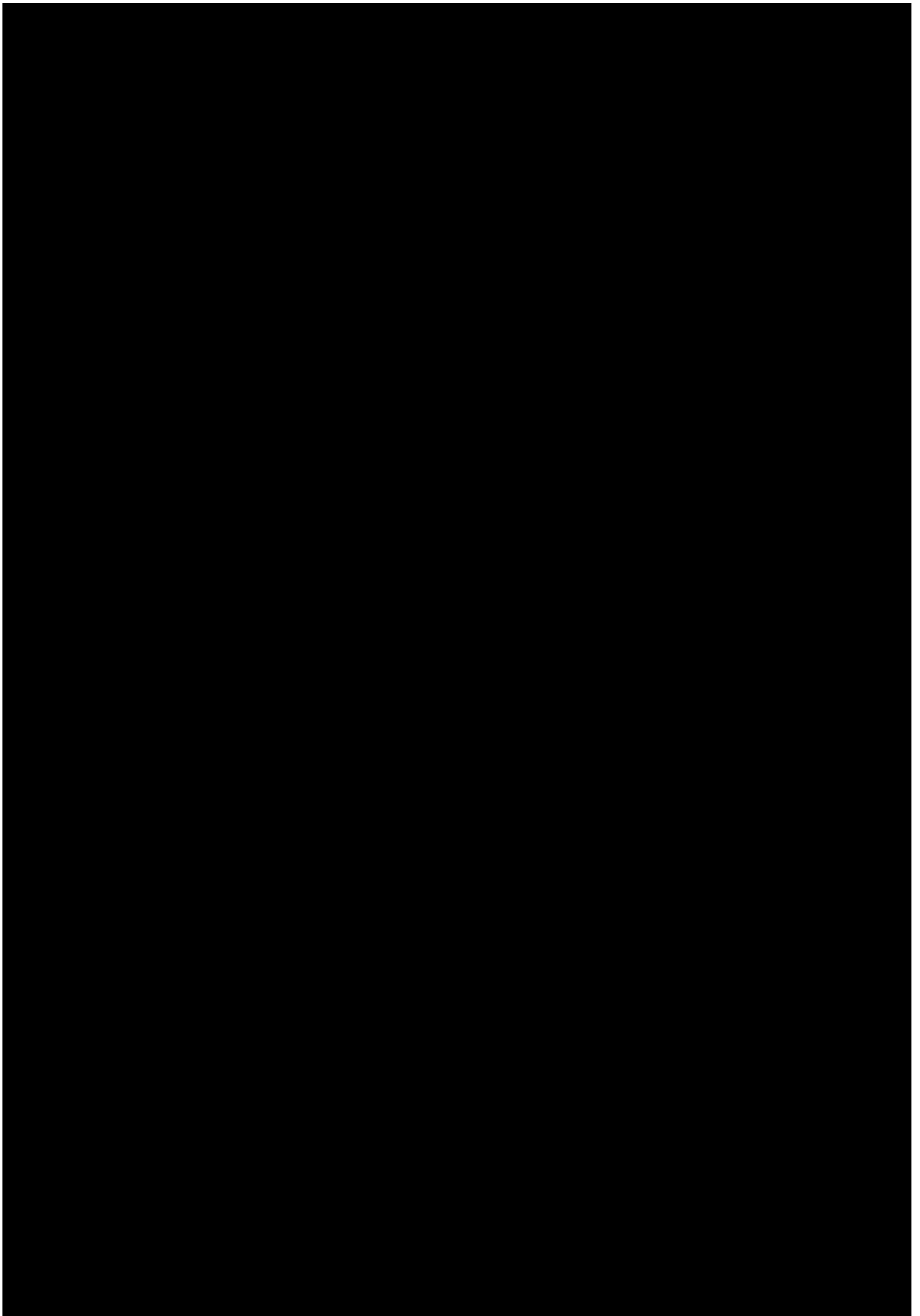
It is thought that by offering 'Off Peak' fares all day, this may play a part in achieving this objective of bringing more people into central London on a Friday.

The trial is aimed at encouraging more customers to commute into London on a Friday using TfL services on these days.

However, at the time of going to print with this edition of TRU, the finer details of this scheme and how exactly it will operate, are yet to be fully confirmed.

We will update you further on how the offer will be implemented once these details have been confirmed.

# OFF PEAK FRIDAYS?



## LOCATION DESCRIPTION UPDATE

We had hoped to be able to report on major progress in the updating of station base data to more accurately reflect the location of devices within a station and to associate up to date opening and closing times, for the purposes of calculating device availability.

Although we have now updated data for around 54 stations, we are still awaiting test reports to be run for the first couple of locations, to confirm that the changes we have made have successfully overcome some of the current issues we are trying to address.



Once this has been confirmed we will then start the process of updating time bands for these sites into the live system.

Further progress has been rather hampered by the change freezes associated with the recent December and forthcoming March Fares Revisions, but in the meantime we will be continuing to gather time band data for the next batches of stations to be reviewed.

## 2024 FREEDOM PASS REISSUE

It has once again reached that time of year when London Councils start to renew all of the 108,000 Freedom Passes that are due to expire on 31 March 2024.

This started with the 84,000 Older Persons passes on Monday 05 February, and will be followed by all other passes from Monday 12 February and is expected to take until approximately 15 March to complete the rollout.



The new Freedom Passes will have an expiry date of 31 March 2029 and can be used for travel immediately.

As with all Oyster cards any customers with failed, damaged or disabled Freedom Passes are required to purchase tickets to cover any travel until their replacement card has been issued to them. Customers who query this should be referred to the TfL website, the TfL Conditions of Carriage and / or the conditions of issue they received with the Freedom Pass.

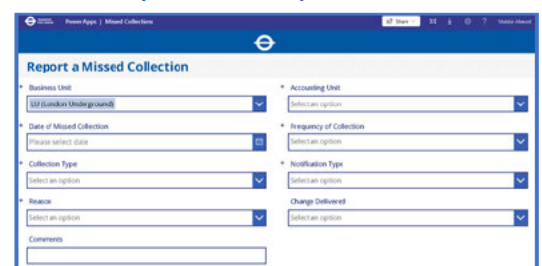
## MI APPS MIGRATION

One item that we were unable to cover in the last TRU was that on Wednesday 13 December the Mi-App Ticketing Missed Collection form was decommissioned and replaced by the Power App - Missed collection form as the default application for reporting missed collections.

The new form is available from the Microsoft Power Apps on your iPad or you can simply [click here](#). You can install the "Power Apps" app on your iPad from the Other Apps categories via the "Comp Portal".

The [Ticketing Missed Collection](#) page on Platform has also been updated to provide a link to this form.

Users should note that this new form is not currently linked to the Station Logbook. If there is a missed collection, following the submission of a Missed collection notice, you must add an item in the Station Logbook by selecting the "T&R Missed collection Notification" as the Entry type.



## CONTACTLESS PAYMENTS – DELETING EXPIRED CARD DATA

Since contactless payments were introduced in 2012, TfL have used two systems to manage journey / payment history and for applying refunds, both systems are web-based and retrieve data from the FTP Back Office, with one for customer use and the other used internally by Customer Services and other business areas.

Importantly, as these systems hold personal data, they must be secure and comply with all data retention policies.

As Payment Card validity varies between 3 to 5 years, TfL have retained a large number of expired Contactless Payment tokens, where cards are no longer approved for travel and have no travel payment history as it is policy to retain this information for a maximum of 13 months.



From Thursday 08 February,

- Contactless Payment tokens from cards that expired more than 13 months ago will be deleted from the FTP Back Office
- Any customer with cards attached to their online account that expired more than 13 months ago will no longer see them listed on their account,
- Internal users will no longer see expired cards in their systems and reports.



Going forward, once a Contactless Payment Card expires and TfL no longer hold any usage history, card details will be removed from online accounts and the token deleted in Back Office systems.

As well as complying with data retention agreements, this will improve application performance and allow easier improvements to the system in the future.

## BIG SLEEP OUT

Railway Children's annual 'Big Sleepout' will take place on Thursday 14 March 2024, and they are looking for supporters to join them in the challenge of sleeping out on a cold, hard, railway station floor for just one night – while raising funds, but most significantly raising awareness of Railway Children and the work they do.

The #BigStationSleepout was a huge success in 2023 with over 360 people sleeping at nine stations across the UK, this year Railway Children want to get even bigger, as they have 12 different locations including the stations listed below. Can you join them?

To find out more about the event or if you wish register to take part [click here](#) for more information.

2024 stations include:



And a little further afield



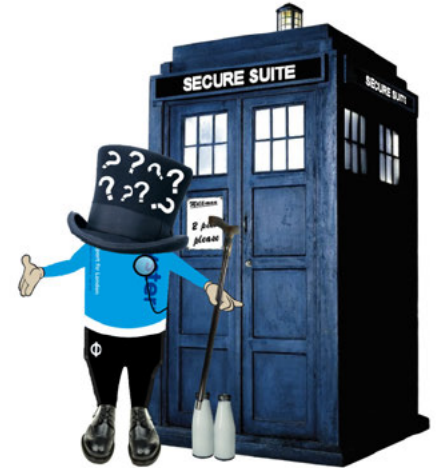
# SPECIAL FEATURE

## TRU REVIEW OF 2023

In the first edition of TRU each year, we traditionally take a look back at the T&R events of the previous year and revisit some of the predictions set out by Olly Oyster in the previous December's edition of TRU.

Despite ongoing financial issues, many of us had hoped for a much better 2023, but it turned out to still be challenging for many people, with a number of new challenges that we didn't expect to face.

In December 2022, Olly outlined his vision for some of the things expected to happen in the year ahead, so on the next 2 pages we have dusted off the 8 items he outlined and review what actually happened on each one during the last year.







### SO, WHAT WAS OLLY'S 2023 VISION?

1	A Spring Fares Revision	<p>We looked forward to 2023 with a degree of uncertainty around fares revisions, due to some very late decisions and late confirmation of the detail around certain fares. The main revision in March went very well despite much reduced timescales. One of the impacts was that the traditional May Fares revision was pushed back to June. However, that didn't stop us squeezing in a 4<sup>th</sup> fares revision in December, which meant that we had actually had a revision every 3 months through the year!</p>	
2	Cash Handling Device Upgrades	<p>Good and bad news on the CHD front. 2023 saw fewer failures of the components within the note handling units, which had hurt us in 2022. However, there were still supply chain issues with getting replacement parts from Italy, for the devices that did fail during the year. Disappointingly, although we were able to start the Vanguard of the new CHD software and replacement of device PCs, a number of issues have hampered us being able to start the rollout to other stations, although there is a slight glimmer of hope on the horizon (as outlined on Page 18)</p>	
3	POM Coin Handler Upgrade	<p>A project that was successfully completed within the year as planned. All of our AFMs and MFMs received replacement coin handlers to improve reliability. Although we did have to go back and make a small retrofit to the units after installation.</p>	
4	New Ticket Halls	<p>We were looking forward to potentially 3 new ticket halls opening during the course of the year. In reality, the only one to open was the new Bank (Cannon Street) entrance. New entrances at Paddington and Knightsbridge are yet to open.</p>	



# SPECIAL FEATURE

## SO, WHAT WAS OLLY'S 2023 VISION? (Continued...)

5	Further Reduction in POMs	Unfortunately, another one of Olly's aspirational goals that didn't come to fruition. There were no further reductions during 2023, but it is still hoped that further phases of work will be undertaken in 2024 (as outlined on page 14).	
6	Farewell to the QBM	Linked to the previous goal, this was another that wasn't achieved in 2023. The last 20 QBMs have managed to cling on throughout 2023, although their days are likely to be numbered, as they have not been included within a number of forthcoming upgrade programmes.	
7	Contactless Expansion	Unfortunately, yet another thumbs down with this goal as well. It was looking good during the year, with preparatory work for project Oval and even an extra fares revision scheduled for December. In the end the expansion to the first batch of stations was postponed at the last minute and it now looks as if the planned expansion of contactless payment will not happen until later in 2024.	
8	Barcode Ticketing	Finally another goal where frustratingly very little progress was made during 2023. We had hoped that gates at a number of stations served by NR services would be equipped with barcode reading equipment during 2023, but unfortunately, we currently do not appear to be much nearer resolving contractual issues between TfL and the Rail delivery Group (RDG) to allow this to happen.  In the absence of this final solution, attention has since turned to an interim fix and a planned trial of handheld barcode readers at some key stations (further details are included on Page 13)	

So in conclusion, it wasn't a great year in terms of the objectives that Olly was looking forward to seeing completed in 2023, with only 2 of the 8 items getting a thumbs up in our review.

It wasn't all doom and gloom though as there were a number of other things that were successfully completed during the year.

- A review of G4S collections successfully expanded the number of low cash volume stations where dynamic scheduling of collections is now in place.
- Ticketing consumable hubs were successfully established across the network to more efficiently distribute stocks of items and avoid the need to order stock we already have.
- Centralised control of the issue of ROLT/RLMP and Inability to Pay Fare pads was introduced, together with monitoring of the use of these notices.
- Cubic successfully completed the removal of the last of the older style Manual Gates and the replacement of worn gate ramps across the LU network. We also commenced a programme to replace the paddles. Motors and paddle shafts on all Wide Aisle Gates (WAGs).



Fingers crossed that 2024 will see more of Olly's 2024 objectives completed (see TRUI49).

# SPECIAL FEATURE

## 150 EDITIONS OF TRU

So, we are very pleased to have reached another milestone with the 150th edition of TRU since it was first launched in May 2005.

As with previous “milestone editions”, we thought we would take a look at some of the back issues and some of the major stories and features we have covered previously.

The very first edition appeared under the title “What’s Happening?”. Over the 18 and a bit years since then 149 further editions have appeared with the lead stories covering a wide range of Ticketing and Revenue collection issues.

Looking through the archives, front-page articles have generally been dominated by fares revisions, with the announcements of increases, delays, freezes and the implementation changes to prices and products. Putting fares announcements to one side, we’ve pulled together a summary of some of the headline topics covered during the history of TRU.

Issue / date	Key topics
TRU01 May 05	<i>As mentioned above, the first edition was distributed under the banner of “What’s Happening” and lead with the announcement of an increase in the Penalty Fare from £10 to £20. Ironic that in this first edition this was announced when in TRU150 we are covering the increase in the Penalty Fare to £100. The first edition also covered the introduction of the Child Oyster Photocard.</i>
TRU02 Jul 05	<i>The next edition two months later proudly announced the planned rollout of the first generation of Chip &amp; PIN units to our POMs and initially on QBMs. Again linking to two features within this edition, with a report on the progress towards implementing a third generation of Chip &amp; PIN units and the planned withdrawal of the last of the QBMs.</i>
TRU08 Mar 06	<i>Jumping ahead to 2006, the eighth edition saw the announcement of plans to offer free travel to children under the age of 11.</i>
TRU10 Jul 06	<i>Reaching double figures, in the summer of 2006 we announced plans charge a “Maximum fare” for incomplete PAYG journeys, which was planned to come into effect in November 2006.</i>
TRU13 Apr 07	<i>This edition led with coverage of a trial of a now long forgotten Oyster Card Dispensing machine. These devices had a short life and were basically converted map vending machines, which were stocked and maintained by a contractor with pre-issued Oyster cards. Not a great success and subsequently replaced by adding a card dispenser to the AFM and later the MFM.</i>
TRU14 Jun 07	<i>Saw the first step in the gradual change in customer payment habits with the announcement that LU ticket offices would stop accepting cheques from 15 July 2007.</i>
TRU17 Oct 07	<i>Announced the launch of another forgotten bit of Oyster history, with the launch of the short lived Barclaycard OnePulse card. Not a forerunner of contactless payment, but a bankcard with an Oyster chip embedded in it.</i>
TRU18 Nov 07	<i>Covered the transfer of stations on the north end of the Bakerloo line and Richmond branch of the District line to LU, and known as the RSLU stations (Regulated Stations on London Underground). The temporary arrangements making these stations different to other LU stations were ring fenced for 2 years, but 16 years later have not been greatly changed.</i>
TRU21 Mar 08	<i>Announced another forgotten device with the planned launch of the RAPID device for Revenue Control staff to issue Penalty Fares</i>
TRU23 May 08	<i>Two months later we announced the launch of something that is still with us, with the launch of the Zip branded Oyster Photocard.</i>
TRU24 Jun 08	<i>The main story announced the planned expansion of Oyster card acceptance onto National Rail (the OXNR project) in 2009.</i>
TRU25 Jul 08	<i>Another milestone reached and another link to one of this month’s items, with the announcement of a further increase in the Penalty Fare, this time from £20 to £50.</i>
TRU32 May 09	<i>This edition outlined plans to replace the Ticket Office Procedures Handbook (TOPH) with a set of 8 T&amp;R Books covering ticket office and gateline procedures.</i>
TRU33 Jun 09	<i>Another bit of Oyster history was announced with a change of card format and the launch of the Desfire card. Fourteen and a half years later, there are still some of the older Mifare cards in use.</i>
TRU41 May 10	<i>Jumping ahead to 2010, the TRU celebrated its 5<sup>th</sup> birthday (2005-2010) in this edition.</i>

# SPECIAL FEATURE

## 150 EDITIONS OF TRU CONTINUED.....

Issue / date	Key topics
TRU42 Jun 10	<i>It wasn't the lead article in this particular edition but our "Keeping An Eye On The Neighbours" feature reported on the launch of barcode ticketing on Chiltern Railways, again linking up with a topic very much in the news in this edition.</i>
TRU49 Mar 11	<i>This edition featured the launch of a limited-edition Oyster card to celebrate the royal wedding of Prince William and Kate Middleton, the first in a series of "limited edition" cards that were to appear in the following few years.</i>
TRU50 Apr/May 11	<i>Another landmark edition celebrated the launch of the Oyster card dispenser on the AFM.</i>
TRU58 Mar 12	<i>In a year dominated by the Olympics and with a series of editions covering ticketing aspects of the event, the March edition covered changes to cash collection arrangements, which briefly saw our services split between G4S and Brinks.</i>
TRU67 Mar 13	<i>Announced the launch of the Apprentice Oyster Photocard offering discounted travel to young people enrolled on apprenticeship schemes.</i>
TRU77 Jul 14	<i>Ten editions later and the big announcement was about the launch of contactless payments and we all know how that has grown since then.</i>
TRU91 Apr 16	<i>Marked another major event in terms of payment technology, with the launch of the polymer £5 note in the UK.</i>
TRU92 May/June 16	<i>Heralded the launch of the first regular weekend "Night Tube" services and the ticketing aspects related to this.</i>
TRU100 May 17	<i>A year on and we celebrated our centenary edition of TRU.</i>
TRU109 Apr/May 18	<i>Covered the launch of a new range of TSID cards (the 180000 series) which were subsequently to remain in use for over 4 years before they too were replaced by the current series.</i>
TRU110 Jun 18	<i>Our main article in this edition concerned the launch of TfL Rail services to Heathrow Airport, the first step toward the eventual opening of the Elizabeth line to Heathrow. Two editions later in TRU112 in September 2018, we announced the first delay to the opening of the Elizabeth line.</i>
TRU114 Dec 18	<i>Announced the planned launch of Weekly Capping for Oyster users, offering the same benefits as already enjoyed by customers using contactless payment. Little did we know that subsequent global events would delay the introduction until September 2021.</i>
TRU123 Jan/Feb 20	<i>Just before the COVID Pandemic hit. This edition focused on the change of the Oyster card deposit to a non-refundable card, whilst following editions were largely dominated by the impact of the pandemic on our operations.</i>
TRU126 Jun 20	<i>Again dominated by the impact of COVID, this edition led with the announcement that most stations were operating cashless from May 2020 onwards.</i>
TRU132 Mar 21	<i>The headline announced the return to "normality" after over a year where everything had been hugely disrupted.</i>
TRU134 Oct 21	<i>Finally confirmed the much-delayed launch of Weekly Capping on Oyster.</i>
TRU138 Apr/May 22	<i>Saw the final opening of the Elizabeth line through central London and the release of a celebratory limited edition Oyster card.</i>
TRU140 Aug/Sep 22	<i>Announced a rise in the Oyster card fee from £5.00 to £7.00 as part of the September Fares Revision changes.</i>
TRU144 Mar/Apr 23	<i>Prepared for the 20<sup>th</sup> anniversary of the Oyster card with plans for a further limited-edition 20<sup>th</sup> anniversary card.</i>
TRU146 Jul / Aug 23	<i>Outlined the details of the planned but subsequently delayed launch of Project Oval, which in a similar way to OXNR expanded Oyster onto NR services, will eventually see the expansion of contactless payment throughout the south east.</i>

As you have seen, these 150 issues have covered a lot of ticketing history, achievements and innovations and we are very proud of our little publication. The TRU has been a vital tool for recording major events, initiatives and even our failures and hopefully you have enjoyed your journey with us. We will continue to provide news for as long as we can, and your feedback is important to us... so please keep it coming!

From: [REDACTED]  
Sent: 19 December 2023 09:57  
To: Ask Olly  
Subject: TVM question

Hi Olly,

We've had 3 x TVM machines at Bank (Cannon St) since our new entrance opened. Whenever we get a problem that requires an engineer to do a cold start of a TVM, it seems to wipe all information regarding the contents of the vaults. This has happened on all 3 machines and the cold start is usually used due to the screens freezing.

Weirdly the hoppers and recyclers retain their information with regards to contents but not the vaults. This inevitably leads to dumps of the machines having to take place. Any ideas why this is happening? It doesn't seem to happen when MFMs are cold started.

Kind regards

[REDACTED]



Hi [REDACTED]

On the MFM if there is a need to cold start the device, the engineer is required to remove all of the cash from the device, as it results in the device settings being reset to zero. What you have described, sounds as if it may be a warm start where the device isn't fully reset?

On the TVM if the device is cold started the device should be de-cashed so that the actual contents are reported accurately. We will raise this issue with Cubic, as we have been made aware of some other incidents where money has been left in the device, resulting in discrepancies on subsequent services.

Regards

*Olly Oyster*



From: [REDACTED]  
Sent: 06 January 2024 13:07  
To: Ask Olly  
Subject: NR Ticket Acceptance.

Hello Olly,

When there is engineering work on National Rail, LUL accept NR tickets on the routes / stations listed in 'Hot Issues'. It states that paper tickets will only be accepted.

E tickets and ITSO format smart cards are not accepted. E tickets can be checked by a manual inspection (same as the paper ticket) and the ITSO smart card can be read via the POM.

The rail industry and TfL are encouraging people towards paperless travel, this appears to be sending out a contradictory message. What is the reason for only accepting paper tickets?

Regards

[REDACTED]



Hi [REDACTED]

The reason for the current policy being restricted to magnetic tickets and not being extended to include ITSO or barcoded tickets on mobile devices, is to minimise the number of products that have to be visually checked by staff, for which we do not currently have effective methods of checking.

As you say, you could undertake a visual inspection of a barcode format ticket on a customer's phone, but we currently do not have any method of validating these to determine whether they are genuine or a screen shot and without validation, its not possible to determine whether the ticket has been used or not, potentially allowing a customer to subsequently request a refund on an "unused ticket".

Shortly, we hope to trial some handheld barcode readers at a small number of locations and if successful might allow us to accept barcode NR tickets on certain routes, at times when there is engineering work or disruption.

Regards

*Olly Oyster*



## BARCODE TICKETING

The issue of barcode format National Rail tickets continues to be a regular topic in our mailboxes, particularly around stations which are directly served by NR train services.

The volume of barcode format tickets being issued by the various train operators (TOCs) continues to steadily increase, but issues are currently restricted to wholly NR journeys.

Barcode format tickets should not be issued for any journey involving travel on LU services (including tickets where a 'Cross London' journey is required).

As outlined in one of our Ask Olly letters on Page 12, this restriction also applies to where ticket acceptance is in place for engineering work.

The question of validity of barcode tickets is quite straight forward at the majority of LU stations which are not served by NR trains; no barcode ticket is valid for any journeys from these stations.

Things are more difficult at stations where NR platforms are situated inside our gateline and where the relevant TOC can issue barcode format tickets to customers using their trains and unfortunately, as we have previously outlined, our gates currently cannot accept.

As we have explained in previous TRU articles on barcode ticketing, the task of installing barcode readers onto our gates is proving to be a bit fraught and timescales for resolving contractual issues between TfL and the Rail delivery Group (RDG) do not look promising.



As an interim measure, we are continuing to pursue a trial of handheld barcode reading equipment at a number of stations served by NR services.

This was initially planned to take place at Stratford, as this location was seeing very high levels of customers with barcode tickets, but in recent weeks we have been looking to expand this to a total of 10 stations listed below.

Proposed trial stations			
BOND STREET	FARRINGDON	FINSBURY PARK	HIGHBURY & ISLINGTON
LIVERPOOL STREET	MOORGATE	OLD STREET	STRATFORD
	TOTTENHAM COURT RD	WHITECHAPEL	

Hopefully in our next edition of TRU we will be able to provide a more detailed update on when these proposed trials will be able to start and how the equipment will be used.

### Just what is barcode ticketing?

What a good question... well, the type of barcode used on ticketing that we are talking about is called a "QR code" or quick-response code, which was invented way back in 1994 by a Japanese company for labelling automobile parts.

Whereas a simple striped Universal Product Code (UPC) barcode can only provide product information, A QR code allows much more information such as how it was marketed, where it was purchased, origin, destination, date, validity, payment type, discounts, a website and so much more.

Interestingly, the inventors of the QR code based their design on the stones in the Chinese "Go" strategy game made up of black and white stones. Although most people are drawn to the black squares, both the black and white sections within the code contain information.

Unlike a UPC code which were designed to be mechanically scanned by a narrow beam of light, a QR code is detected by an image sensor such as a camera and then digitally analysed and translated.



# REVENUE PROJECTS

## POM REDUCTION PHASES IV AND V

After a long period of inactivity, there has recently been renewed interest in progressing a further phase of POM reductions, mainly focusing on the removal of the last 20 QBM from the network, as these devices are not in scope for the forthcoming PED upgrade.

Some sites will see removal of the QBM without a replacement device, but at others we are proposing to install a free-standing TVM in its place. This should improve the customer experience as TVMs have much greater functionality than the QBM. We are also currently reviewing the other sites previously identified for Phase IV of the POM reduction programme, but the aim is now to remove surplus AFMs rather than further on-site mothballing.



Analysis undertaken by TfL Transport Planning following the last phase of POM Reduction, has not identified any capacity issues at those locations, with no need to reinstate any devices that were mothballed as part of this work. In order to move things along without a further extended delay, we are proposing to remove the QBM as Phase IV and then undertake the further POM changes as a fifth phase of the project, as these removals will require the sourcing of infill panels to fill the spaces left in POM arrays following the removal of the excess devices.

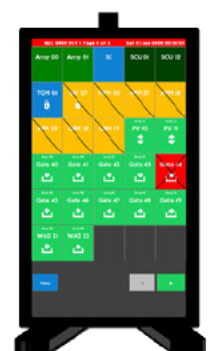
This second phase of work will hopefully see the reinstallation of a number of MFM currently in store, to provide an additional MFM at a number of stations that had their second MFM removed ahead of the Fit for Future Stations Project, to provide additional capacity at some of our “Gateway stations.” Further Phase V AFM mothballing is proposed at:

Station	AFMs	Station	AFMs	Station	AFMs		
VICTORIA	(District)	-3	KINGS CROSS	(Western)	-3	HIGH STREET KENSINGTON	-1
	(North)	-4		(Tubes)	-4	LONDON BRIDGE (Remote)	-4
	(Vic)	-4		(Northern)	-4		

## FEDS UPDATE

As we reported in TRUI49, Cubic have recently commenced a package of works covering POMs, SCUs and Station Computers (SCs) to improve the security of these devices which use the Windows 10 operating system. This will involve some initial onsite hardware modifications which will then allow the remote upgrading of software.

The first phase of this work saw a Vanguard of on-site upgrades to Station Computers and a swap out of SCUs with devices which have been previously upgraded within the Cubic workshop. This commenced on Monday 08 January and was completed on Friday 26 January. This took longer than originally planned due to some stations experiencing staff shortages and a revisit was required to complete the work.



There will be a further Vanguard at the end of February with an additional piece of equipment being fitted within each POM to switch between primary and secondary power supplies. This is being done to allow the downloading of larger update packs than the system currently allows.

At present if a process is not completed within 6 minutes the device will automatically restart, which causes issues if a larger security patch is being sent out. For simplicity we have selected the same sites as used in the first phase of the FEDS programme as listed below).

ACTON TOWN	ALPERTON	BOSTON MANOR	BOUNDS GREEN	EALING COMMON
HATTON CROSS	NORTH EALING	NORTHFIELDS	PARK ROYAL	SOUTH EALING
EAST ACTON	GREENFORD	HANGER LANE	WEST ACTON	BATTERSEA POWER STN
CHISWICK PARK	GUNNERSBURY	KEW GARDENS	HARLESDEN	KENTON
AMERSHAM	BAKER STREET			

## MFM MODIFICATIONS

In TRUI49 we reported on the completion of the rollout of a new version of MFM software to all of our MFMs before Christmas. As often happens, not long after the completion of one upgrade, comes the need to deploy a further software update.

Cubic are scheduled to Vanguard this latest version of MFM software to 33 devices (roughly 10% of the MFM fleet) commencing on the night of Monday 05 February 2024.

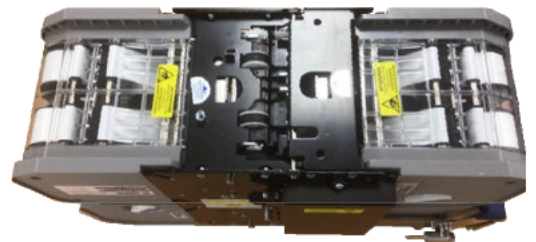
The devices selected for this are the same as those used when we previously Vanguarded the current version of software. The stations involved are shown in the table below.



Date	All MFMs at			
Tue 06 Feb	BRENT CROSS	BURNT OAK	COLINDALE	EDGWARE
	GOLDERS GREEN	HENDON CENTRAL	GOODGE STREET	WARREN STREET
	ALDGATE	BARBICAN	FARRINGDON (Main)	LIVERPOOL STREET
	MOORGATE	TOWER HILL	ELEPHANT & CASTLE	LAMBETH NORTH
	VICTORIA			

The latest software update is being deployed to resolve some minor defects that had previously been identified by Cubic.

These include changes to address some short duration faults on the Oyster card dispenser plus some fixes to improve the performance of the MFM NHU, which weren't included in the last software release.



As mentioned above and outlined in TRUI49, changes have been made to all of the MFMs at the stations shown above to allow station staff greater access to clear note jams when they occur within the Note Handling Unit (NHU).

Prior to this change, staff were only able to clear notes from the top of the validator, but if the note became jammed elsewhere within the NHU, then it would almost certainly require a Cubic technician to attend.



The aim of this change was to reduce the amount of time that devices were out of service or in "no notes" mode, whilst awaiting a technician to attend to clear the note jam.

Devices were modified at the beginning of December and although we have seen a reduction in the number of note unit faults requiring a technician to attend, Cubic have reported that a number of jams that had occurred could have been cleared by staff without the need to report a fault.

Feedback seems to indicate that staff at the Vanguard stations had not read the briefing material provided or did not feel confident in removing the modules to retrieve jammed notes from the device.

As a result, ahead of the modification being made to other devices, we are looking to run some practical briefing sessions to demonstrate the change for Champions from each area, to allow them to then cascade the briefings to colleagues on their area.

Details of these sessions will be published shortly.

# REVENUE PROJECTS

## PED UPGRADE

Further to the last update in TRUI46, Cubic are continuing development work in readiness for a programme to replace all of the current Chip & PIN devices (PEDS) on our POMs.



As previously outlined, the current devices are at the end of their life and the manufacturers finished support for these units at the end of 2023. Fortunately, Cubic have a sizeable stock of units which should see us through until when the replacement units are rolled out, but any units that fail and cannot immediately be repaired by Cubic, will not be reusable, so the spares pool will gradually reduce through this year.

As mentioned within our article on POM reductions on Page 14, the 20 remaining QBMs on the network have been excluded from the scope of the PED replacement project, as these devices will have been phased out before we get to implement the new PEDs. The removal of these devices should hopefully provide a slight boost to the pool of spare PEDs.

The planned deployment of the new units has recently been brought forward slightly from the end of 2024 and a Vanguard will hopefully now be possible from the autumn.

Cubic have recently demonstrated the proposed solution to accommodate the new PEDs on the MFM. This was the most difficult of the POM adaptations, as we also needed to incorporate a modification to the note acceptance aperture, to stop notes skewing to one side when inserted by a customer. This is believed to be a cause of some of the note jams we have seen on the MFM. Changes to the casting that houses the PED is required on each device, mainly as a result of these devices also having the capability of allowing contactless card payments.



Some recent images of the solutions currently under development at Cubic's System Test facility are shown above right.

Apart from the process of integrating the new devices into each of our POMs, the new equipment will need to link to a new Bank Card Processor, as the current solution operated by Barclaycard cannot process the transactions from the new equipment. As we learnt from the last PED replacement, the end-to-end testing process to get accreditation for the new equipment, is a very long one.

## SC RATIONALISATION

Further to the previous update in TRUI48, the first phase of this work was completed on Sunday 21 January, when the gates on the Farringdon (Cowcross Street South) gateline were migrated from their own Station Computer (SC) onto the SC in the main part of the station.

The main impact of the change, apart from allowing the removal of one of the SCs from the station, was to allow the Cowcross Street South gateline to now appear on the Station Control Room SCU.

Previously this gateline was not displayed, so staff were unable to see the status of individual gates or make changes to the gateline configuration, as they could for the other 2 gatelines in the main part of the station.

Following completion of this work at Farringdon, we will next turn our attention to Waterloo, where it is proposed to remove one of the existing SCs and consolidate device on the Auxiliary gateline and Waterloo (Assist) POM Room onto the existing SC through which the Main gateline already reports.





# REVENUE PROJECTS

## RTD REPLACEMENT

Cubic have commenced work on a programme to develop the next generation of Oyster card readers (RTDs) which are scheduled to be rolled out next year. The new reader is known as the Hina reader.

These are scheduled to be deployed to all validation devices, so Gates, PValS and bus readers, but not POMs). The initial mock-ups of the new RTD have recently been demonstrated within the Cubic System Test environment and are very similar in appearance to the current readers.

The only significant difference is that the additional capability means that the new reader is likely to be slightly higher than the current version when mounted on the top of a Pneumatic or EI gate.



## MANUAL GATE COMPLETION

Its been a bit 'stop-start' and probably the programme that has had the most "false endings" rather than false starts. However, we are pleased to announce that we finally crossed the finishing line with the programme to replace or remove the last remaining ABP design of Manual Gate, with the completion of works at the final sites Canary Wharf (East) and London Bridge (Borough High St).

We had previously thought we had finished the programme at least twice before, only to find that we had missed a couple of Manual Gates and most recently discovering the remnants of some Jubilee Line Extension (JLE) variants of the Manual Gate buried within the fixed glass panels at a couple of JLE stations.

So hopefully its now finished, unless someone unearths another Manual Gate, we are unaware of!



## LUGGAGE CHUTE REMOVAL

Following the completion of a programme to reduce the number of Manual Gates and replace the last of the older style ABP Manual Gates with the newer Cubic design of Manual Gate, Cubic have identified 8 sites listed below, where the old-style Luggage Chutes are still in place.

BAKER STREET (Met)	1	PADDINGTON (Praed St)	1	VICTORIA (District)	2
BANK (Monument)	2	SOUTH KENSINGTON	1	WATERLOO (Main)	2
OXFORD CIRCUS (Main)	1	EDGWARE	1	WATERLOO (Auxiliary)	1

With the introduction of WAGs these are rarely if ever used for luggage and at a number of locations have been identified as potential weak points in our gatelines. Although these chutes were installed as part of the original pneumatic gatelines in Zone I, a survey has recently also discovered an example at Edgware, where gates were installed much later. If your station still has a luggage chute and its not on the list above, please let us know ASAP!

As Cubic are responsible for replacing damaged or missing rubber strips that hang down from each chute, they have suggested removal of the remaining units and installation of replacement glass panels in their place.



# REVENUE PROJECTS

## CHD SOFTWARE VANGUARD

Since the last update on the planned Cash Handling Device upgrades in TRUI49, we have unfortunately made little progress towards restarting the rollout of the new CHD software and replacement PCs.

We had hoped to commence upgrades at stations on the north end of the Metropolitan line during week commencing 22 January, but this had to be postponed due to a couple of on-going issues.

Although the new software had been working well at the Vanguard stations (Waterloo, Stratford and 25 stations at the eastern end of the Central line) towards the end of December, an attempt to synchronise the user files on both old and new CHD back-offices, had the unexpected result of all of the Vanguard devices connected via 4G modems going offline and not transmitting data. This was subsequently established as being due to the CHDs not confirming receipt of the new user file and it then being sent again and again and again! In fact, we believe at times the large file was being sent every 5 minutes. This then resulted in the monthly data allowance for the SIM used in the modem being exhausted and when this was refreshed again on 01 January, devices came back online but then went offline again within the day, again due to the multiple transmission of the file eating up the new data allowance.

Since this happened, Pay Complete have stopped the user file being sent multiple times and have recently replaced the SIM cards within the routers at these stations to refresh the data allowance. All the stations are now back online. Its that time of year again

A further delay to the start of the rollout is linked to the on-going issue of not being able to find an acceptable solution for the small number of CHDs connected via a fixed line and the TfL IM network, that meets the requirements of TfL's Cyber Security team. Although the devices connected via modem are not directly affected by this, approval is still needed to enable us to proceed.

We are hoping for better news over the next couple of weeks, which will then enable us to plan the rollout to the rest of our CHDs.



## CONNECTION CHANGES

As a result of the difficulties, we have had with the fixed lines used by some of our CHDs and the long delays in getting the necessary firewall changes agreed to allow for these devices to communicate with the new Pay Complete back-office, Pay Complete have recently started to review sites that are connected via fixed lines.

Although some stations have obvious 4G connectivity issues due to the layout and structure of the ticket hall, amongst the list of stations which were installed with fixed lines for the CHDs, there are a number where it is difficult to understand why a modem would not be a workable option. We had previously deployed temporary modems at some of the new Elizabeth line locations due to Capita not being able to configure the fixed line that should have been installed.

To date the results of test undertaken have been very positive and Pay Complete are confident that quite a few stations can be migrated from fixed lines onto 4G modems, as they now have better modems and an upgraded SIM which is better at locating the network with the best signal strength.

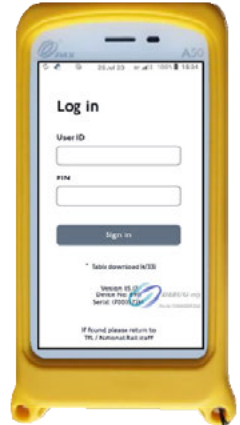
Hopefully we will be able to move a number of sites onto 4G modems in the next few weeks, thus reducing the number of sites that are dependent on the use of a fixed line.



# ...AND FINALLY!

## RID UPDATE

It has been a few months since we provided you with an update on the Revenue Inspection Device (RID), with the last article in TRUI48 covering two issues; the rollout of a new software version and the decision by the manufacturer, PAX Technology to stop producing the actual model (A50 Android MiniPos+) that we use after April 2024.



On the software front, the download went very smoothly and a number of fixes have been successfully implemented. Work is also underway to procure enough spares and replacement parts to cover faults and repairs until a new model is identified, tested and introduced.

For this edition we wanted to share with you a RID usage report produced by the T&R Team and provided to Revenue Control each period.

A total of 177 devices are in use by RCIs and RCOs on London Underground and recent RID reports have shown that the current device is much more widely used to read Oyster, contactless and ITSO formats than its predecessor the RID 1.

The report illustrated below covers Period 10 between December and January just gone.

### Analysis of RID Usage for PD: 10 FY:2023-24

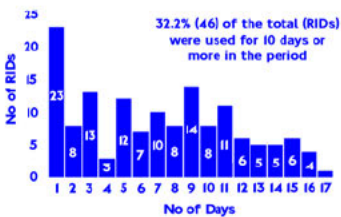
Date: Between 10-Dec-2023 and 06-Jan-2024

No of RIDs issued	<b>177</b>	RIDs Used in the Period	<b>129</b>	RIDs not Used	<b>48</b>	% of RIDs Used	<b>73%</b>	% of RIDs not used/ Other	<b>27%</b>
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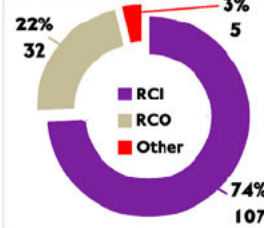
### VALIDATIONS



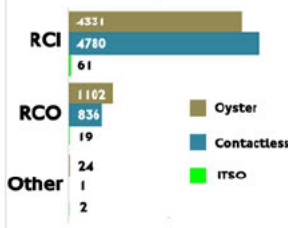
ACCUMULATIVE DAYS RIDS USED IN PERIOD 10



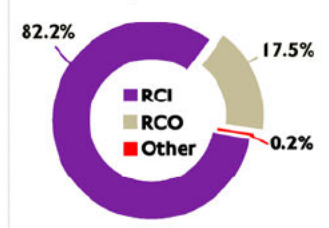
RID allocation by Grade



Total validations by Grade



Validation % by Grade



## LOOKING AHEAD TO TRUI51

TRUI51 is expected to be published at the end of February, when we plan to provide you with updates on:

- Further information on details of March Fares Revision
- Further Update on the CHD upgrade
- Details of planned changes to MFMs
- Update on other projects going on around the network

We also intend to include more of your questions sent in to *Ask Olly*, plus a selection of our other features.

