



## **Fare Payments as a Service**

A New and Better Way of Procuring & Operating Ticketing for Public Transport

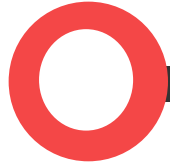
# Agenda

- Masabi & Justride update – Full Fare Collection (more than just mobile)
- The New Challenge of Modern Fare Collection Procurement
- Introduction to Fare Payments as a Service

# The Masabi Story



2002



Mobile  
micropayments

2007



First ticketing  
application

2008



Set UK Rail  
mTicket standard

2012



Launched  
Justride in  
Boston

2014



Multi-format  
validators  
handheld, bus,  
subway

2019



ABT, SDK  
MaaS, cEMV &  
cash





# 5 Offices Around the Globe

London

New York

Boston

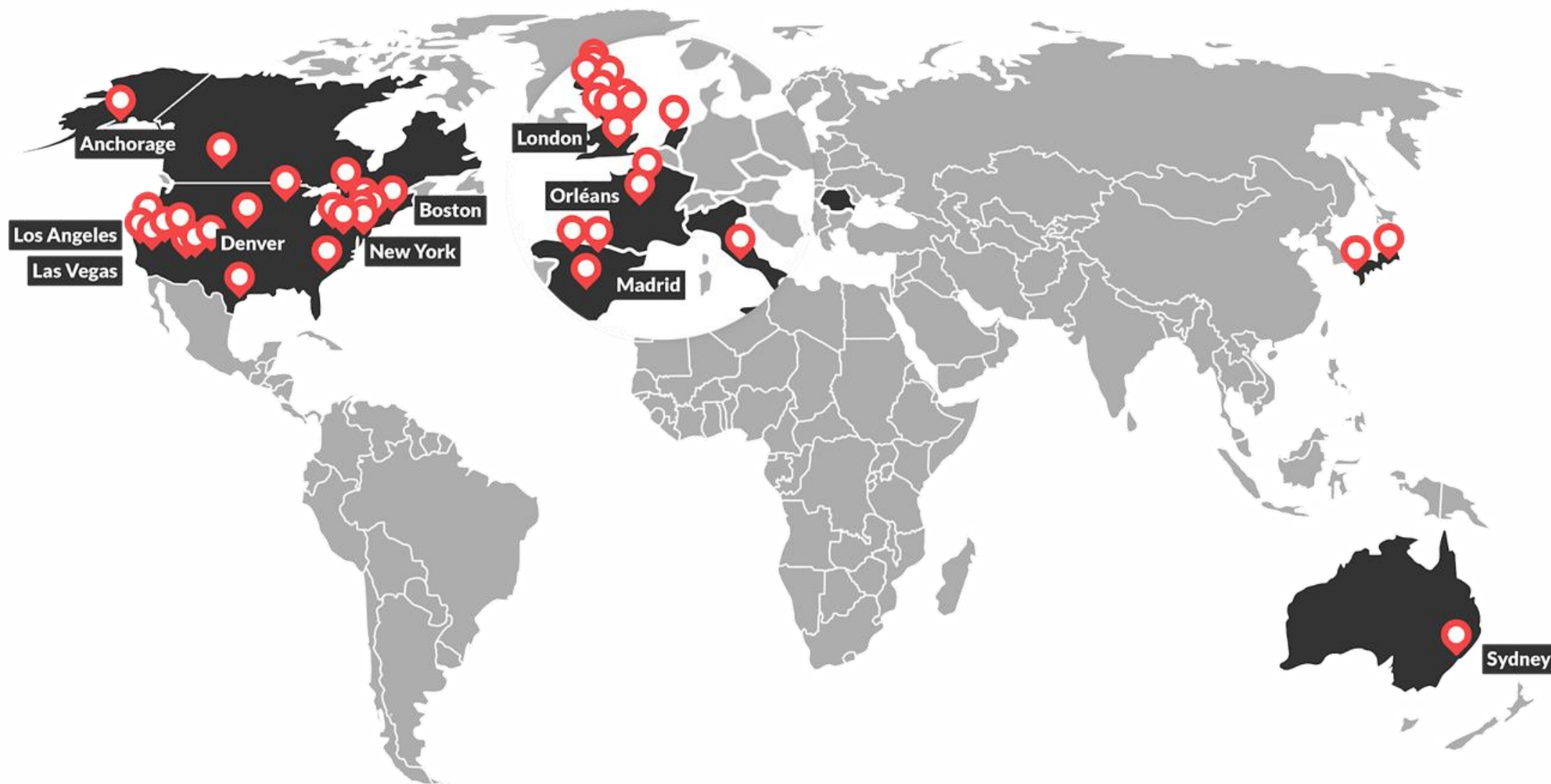
Denver

Cluj





# Deployed in 11 Countries





# Market Leading mTicket Adoption



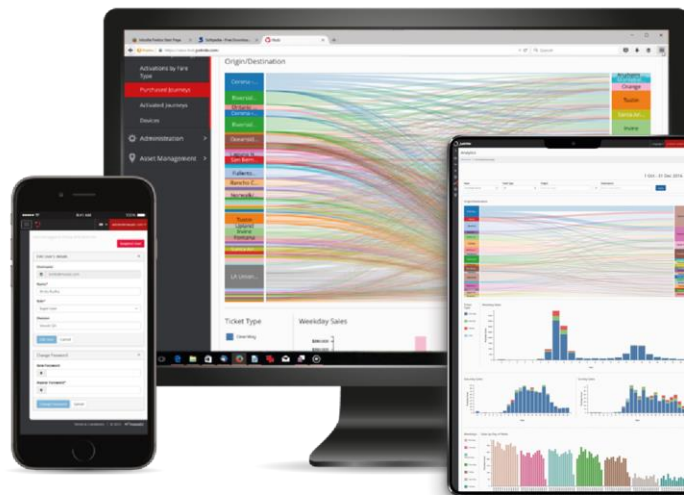
# The Justride Platform



## Sell



## Manage



## Validate



Retail +API/SDK

Hub +API

Inspect +API/SDK



# Justride Capability Modules

Beyond Mobile Ticketing



Enable MaaS  
for Public  
Transit



Mobile  
Ticketing



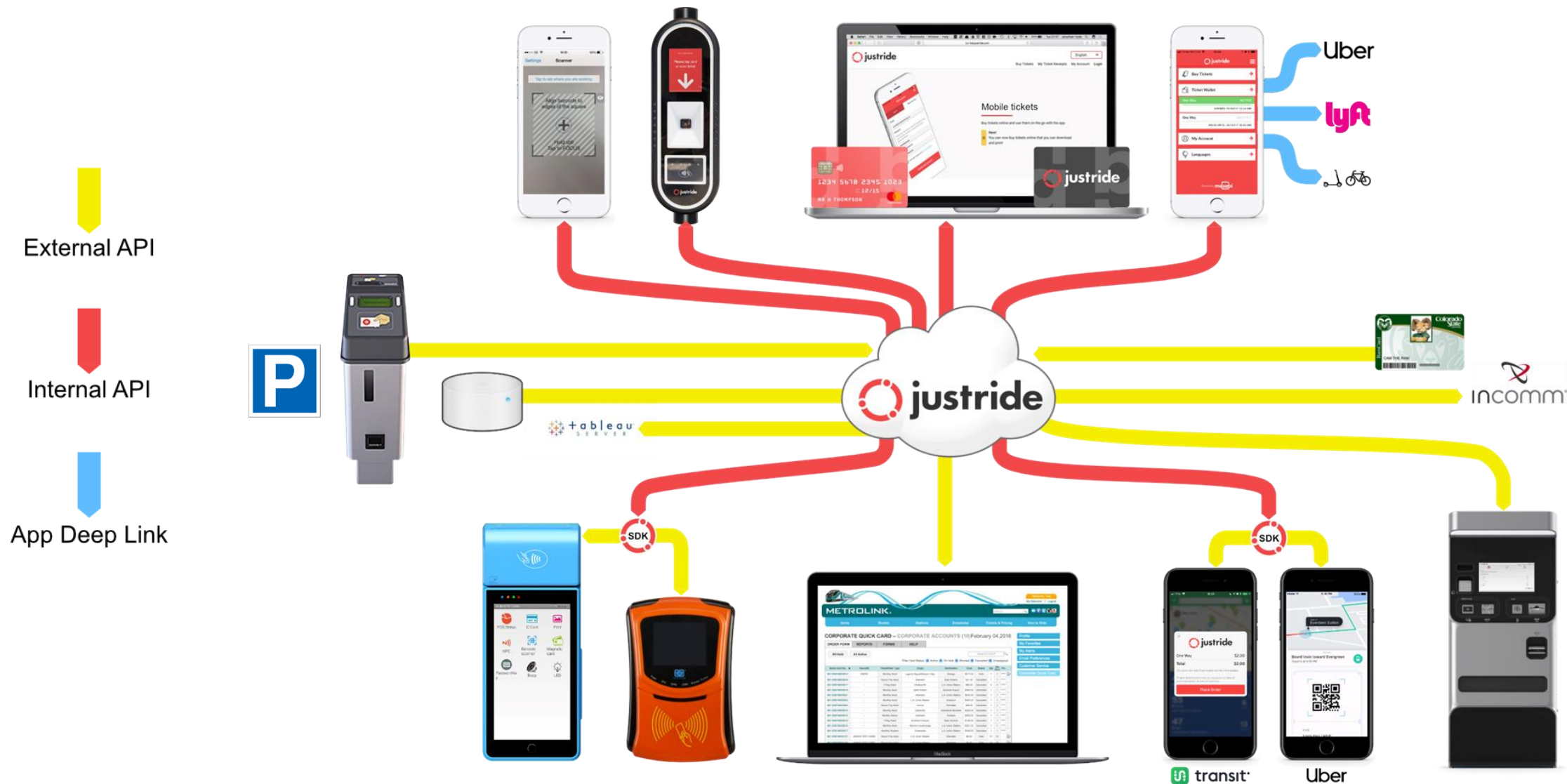
Cash-based  
Fare Payments  
and Account  
Loading



Multi-token  
Account Based  
Ticketing using  
cEMV, Stored  
Value,  
Smartcards,  
and Mobile



# API Platform



# Deployment and Product Partnerships

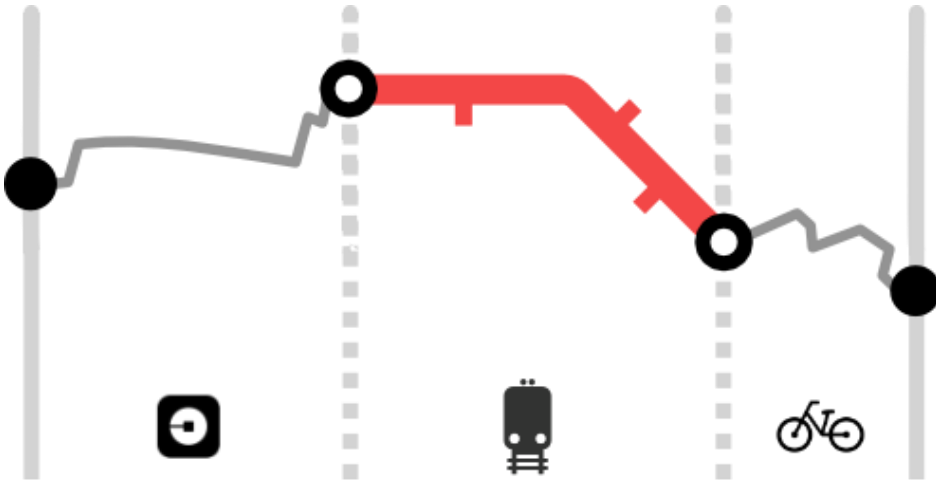




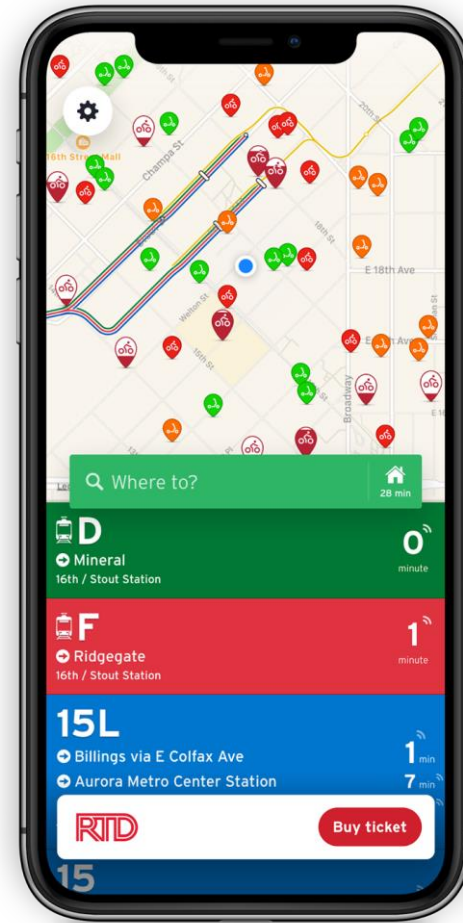
# Practical MaaS: Justride SDK



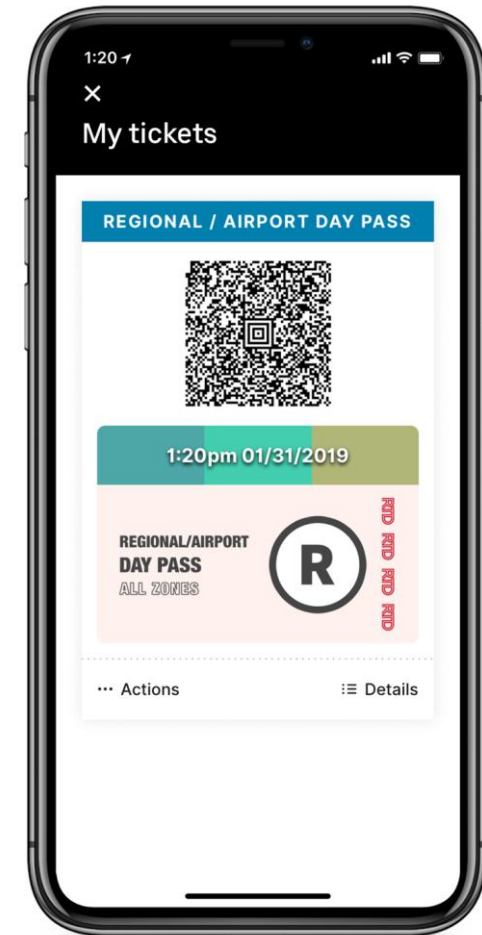
- World's first (and only?) mTicketing SDK
- Selling & delivering public transit tickets through popular 3<sup>rd</sup> party apps and aggregators



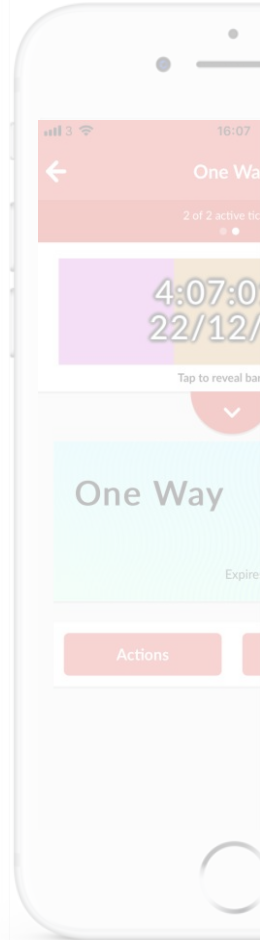
- Offering complete first, *middle* & last mile journeys combining public/private modes
- Leveraging widespread global mobility apps
- Practical MaaS provides additional payment & discovery options, not a monopoly.



transit•



Uber

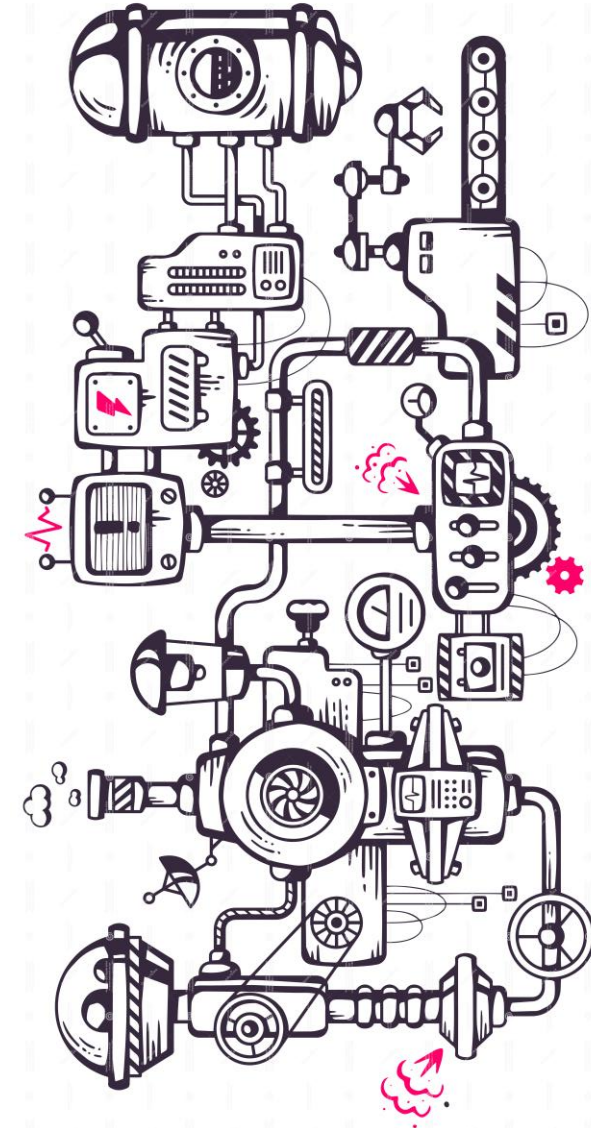


...more coming

# The *Increasing* Challenge of Modern Fare Collection

# Raised Expectations for Modern Fare Collection Procurement:

- mTicketing
- ABT
- cEMV (bringing PCI to bus operations)
- Cash Retail Networks & Cash Digitisation
- API's, Partner Integrations & Extensions
- Regional Integration
- MaaS
  - Local Public/Private Integration
  - Global Aggregator Integration – Uber, Transit, Moovit...
- ***What next***, and when?

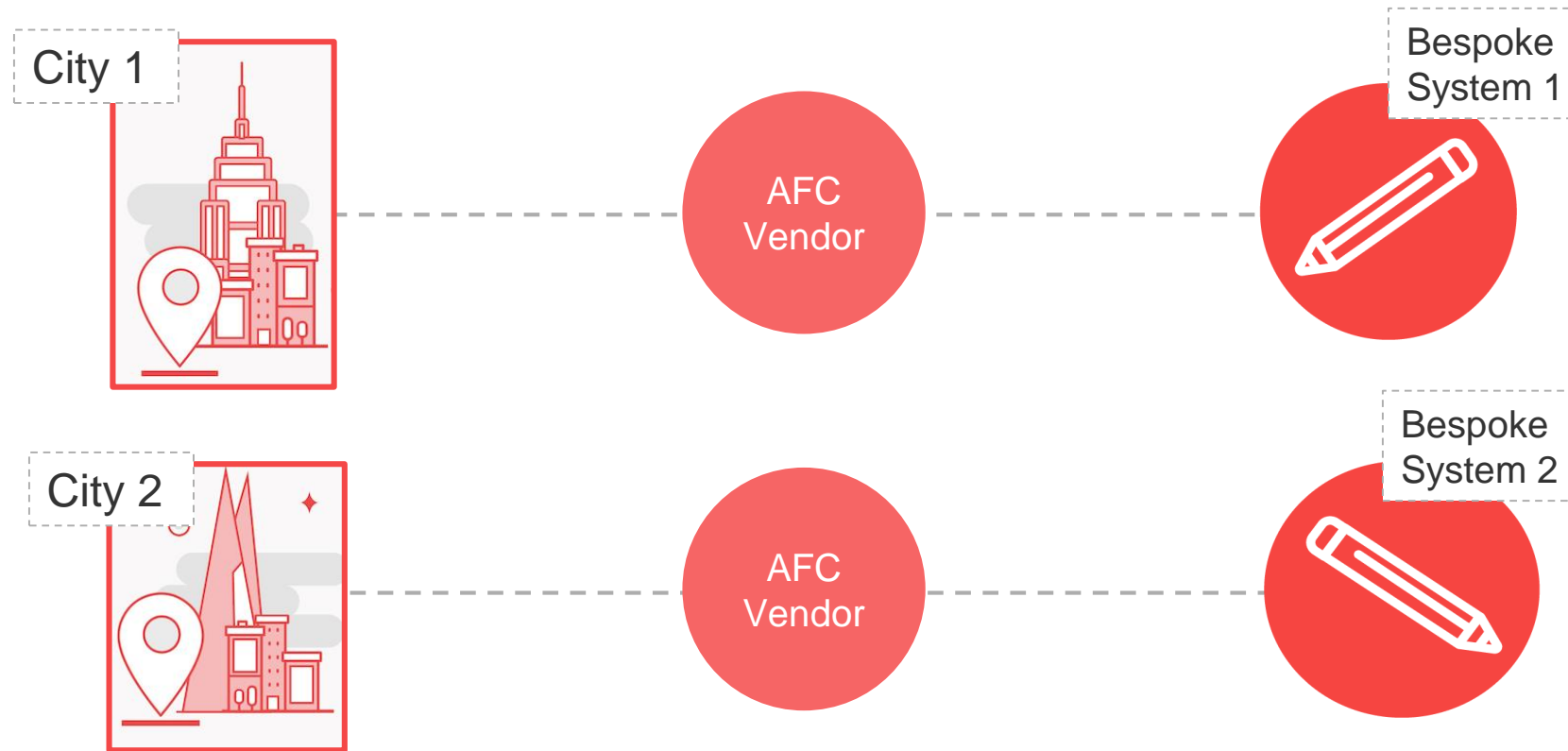




# Bespoke Fare Collection Systems

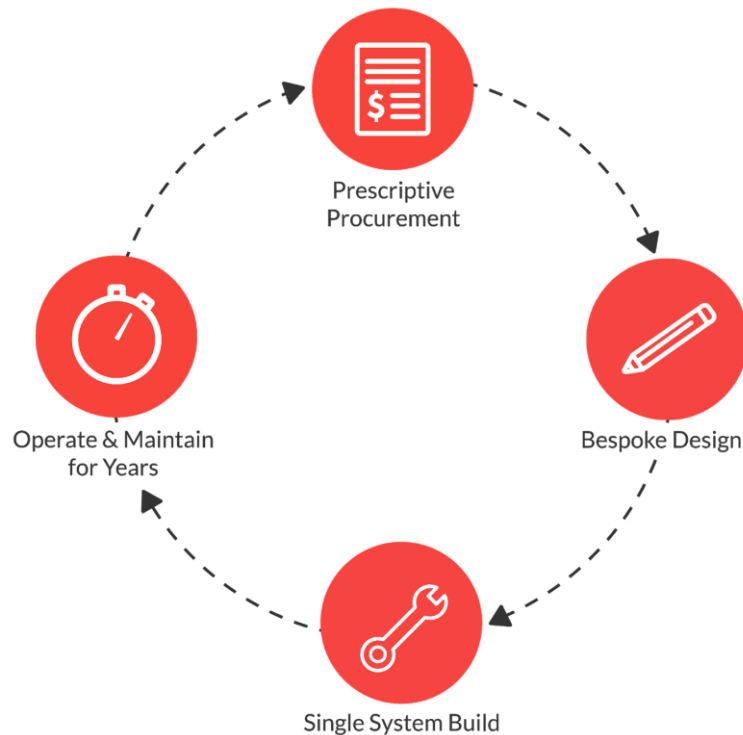


Fare Collection is typically delivered by Fare Collection providers and Systems Integrators delivering bespoke systems for cities around the globe.

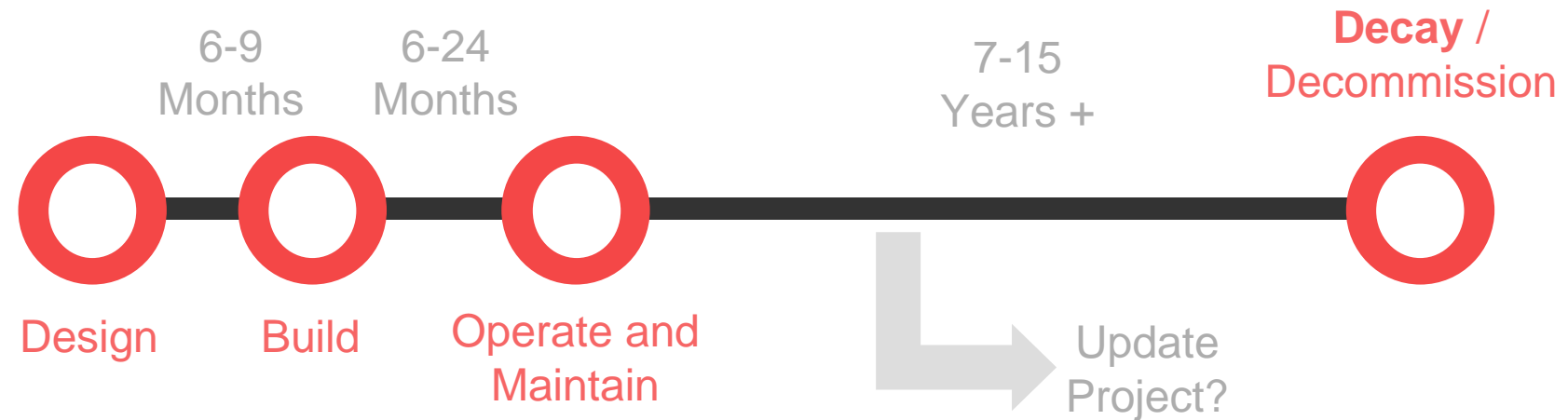


[ note – even if the AFC vendor is deploying features they have built before, normally they will copy/branch the computer code, customise it for the project, test and then deploy a new specific version of that code which must then be maintained individually. ]

# Design Build Operate Maintain (DBOM) Bespoke Systems



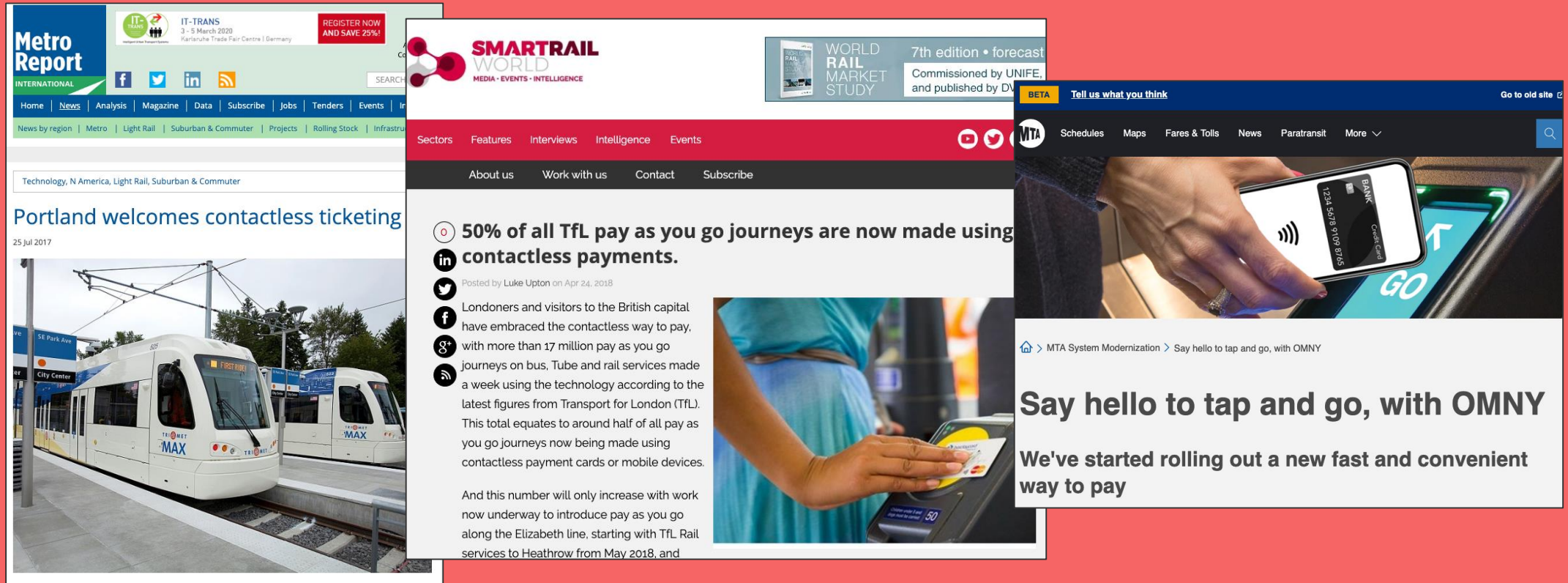
Agencies are Stuck in a Cycle  
of Design, Build and Decay



The design is often prescribed by the agency ahead of the procurement at the agency's risk.

Results of that design might only become obvious months or years after the initial award resulting in change orders and fees to rectify.

# BDOM Projects – Good Results



Complex DBOM *can* be done successfully by a top vendor's “A Team”



# BDOM Projects – Lesser Results



Edmonton

## Smart fare machines finally installed on select Edmonton buses

Regional transit prepares to pilot fare card system five years after funding approved

Ariel Fournier, Oumar Salifou · CBC News · Posted: Jun 25, 2019 4:42 PM MT | Last Updated: June 25

## The cost of SEPTA's Key card system just swelled to nearly \$200 million – way more than planned

by Jason Laughlin and Patricia Madej, Updated: October 25, 2019


SEPTA KEY

## 'Things are delayed' 9 times: A timeline of SEPTA Key setbacks

The digital payment system has been in the works for nearly a decade.

Transportation

## Metro scraps plan for high-tech fare-paying system



## TARC Cancels Contract With Electronic Fare System Company

By Jacob Ryan

## Not so smart: DfT rewrites history on ticketing pledges

Chris Ames  
12 February 2019

When it comes to so-called smart ticketing for rail passengers, ministers have repeatedly redefined what they have also taken a novel tradition of moving the goalposts nearer so they can claim to have scored the record and the extent to which they have in fact failed to see.

...you-go ticketing across south east England as a failure to meet a key target of the DfT's (not necessarily smart) ticketing.

...commitment to make a smart card or 'open data' rail network.'

## Budapest Continually Fails to Introduce an Automated Fare Collection System


Gábor Samyál 2018.12.11.

## RTA smart fare cards on the way, finally, RTA says

Updated Aug 22, 2019; Posted Aug 22, 2019

## New ticketing in Lille: penalties for [vendor]

Posted on August 14, 2013




Calgary

## Calgary Transit relaunches electronic fare card project

Telvent rehired after failed \$3.5M attempt to develop reloadable Connect card

CBC News · Posted: Dec 16, 2013 12:55 PM MT | Last Updated: December 16, 2013



## TfN's smart ticketing runs into trouble as more KPIs missed

Dom Browne  
08 August 2019

Transport for the North (TfN) has failed more key performance indicators (KPI), with its smart ticketing programme running off the rails and crunch talks scheduled for September.

The regional transport body was supposed to have a fully integrated smart ticketing system operating across Mersyairail, TransPennine and Northern rail services by the end of last year. Its business plan and accounts documents also state that its KPIs were based on the delivery of 'The first stages of phase 2 bus and light rail fares, disruption, open data hub, knowledge network and innovation pilots by spring 2019.'

For Phase 3, TfN was supposed to have established 'a Special Purpose Vehicle with transport operators that will commission, accept and run the ticketless travel systems when they are procured and delivered by the end of 2018'.


None of this has been completed, despite £9.26m being spent in 2018-2019 on the programme - £8.2m of this was on capital expenditure. Tens of millions more are being held in reserve for the scheme but have not been drawn down due to the 'slippage' in the programme.

As part of Phase 2 though, TfN announced in May this year that suppliers have been brought on board to deliver an 'Open Data Hub' and 'Disruption Messaging Tool'.

The news comes after Transport Network revealed the statutory body had also fallen behind on its KPI of integrating its Northern Powerhouse Rail plans with the HS2 phase 2b hybrid bill.

The business case has been held up in Department for Transport since February, putting prime minister Boris Johnson's Autumn deadline for a Powerhouse deal in doubt.


New dawn fades



BUSINESSHQ  
6th April 2018

## CalMac owner commits to new ticket service after £1.2m court win

By Margaret Taylor | @MagsTaylorish  
Business correspondent/Columnist



Extraordinary moments happen on ordinary days. Let's set the stage for the extraordinary to happen every day.

But what are the chances of success in Complex DBOM if the top vendor's "A Team" is not available?

# DBOM Bespoke Systems – The Problems



**Expensive**  
to install,  
maintain and  
update



**Risky & Slow to Deploy**  
Systems can  
take years to  
launch, maybe  
with delays,  
change orders or  
cancellations



**No Updates**  
Without  
spending time  
and money  
and more risk



**Often Closed to Integrations**  
With 3<sup>rd</sup> party  
systems



**Not easy to MaaS Enable**  
(Mobility as a  
Service)

# Underserved Agencies



Transit Agencies



Massive \$7bn p/a



Mid \$150m p/a



Small \$10m p/a

Well served

Under served

Virtually ignored

**Underserved segment**

(Poorer service from vendors) Can't afford and do not always need a bespoke solution

## Complex & bespoke doesn't scale

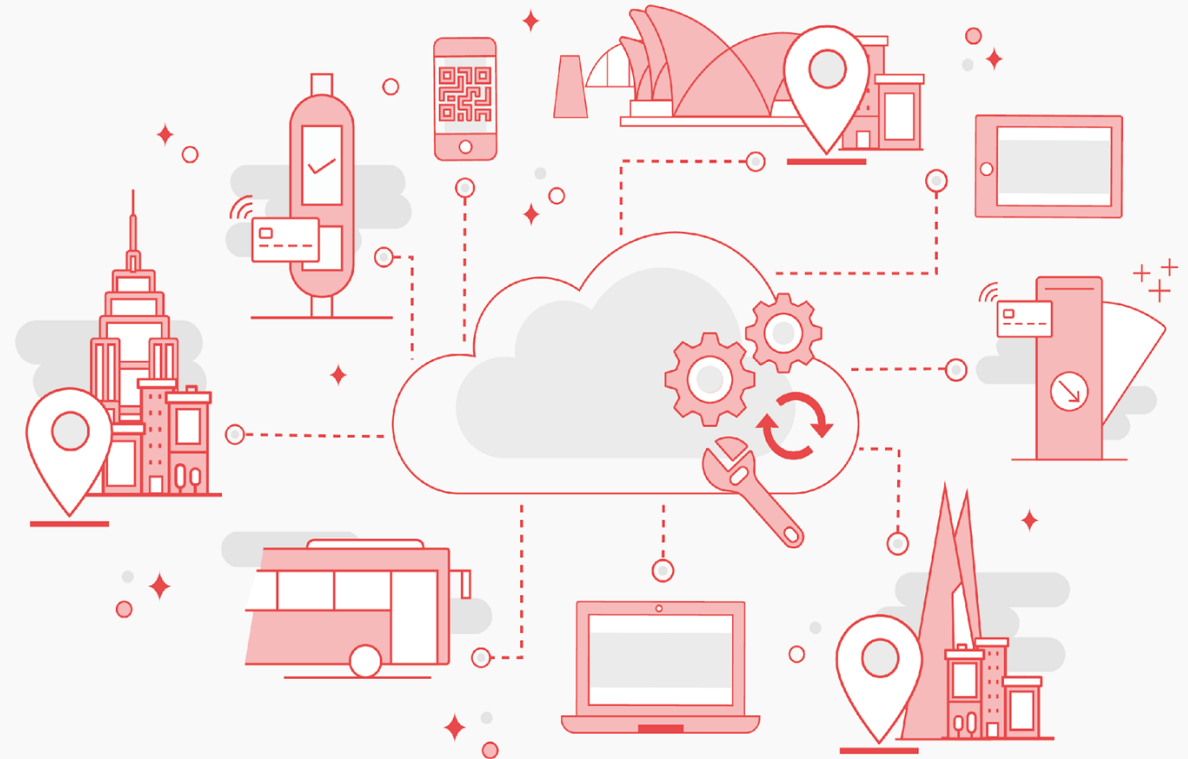




# Fare Payments as a Service



- Platform for all sizes of agencies to use
- Agencies sign up on a pay as you go (or subscription) basis
- ***Configured*** to suit each agency (multi-tenant, not multi-instance)
- Fast, low risk deployment of trusted AFC functionality & API's
- Regular updates with security updates & new functionality as market need develops

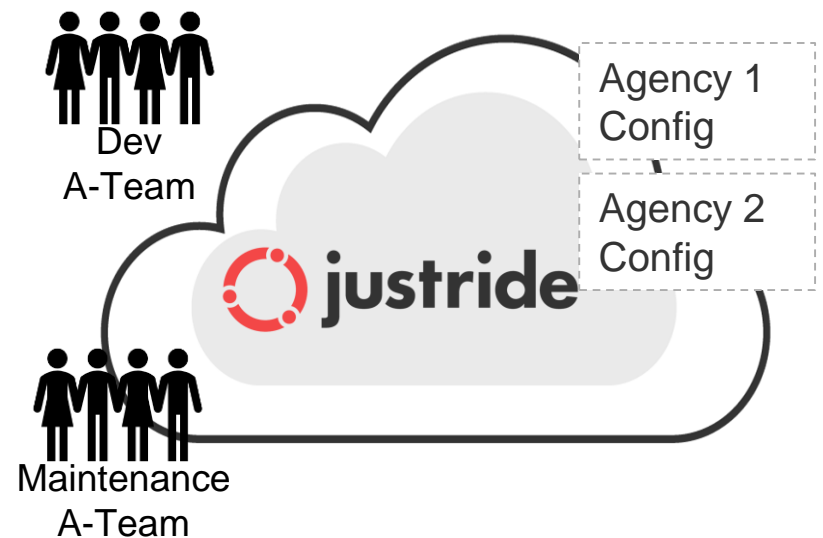
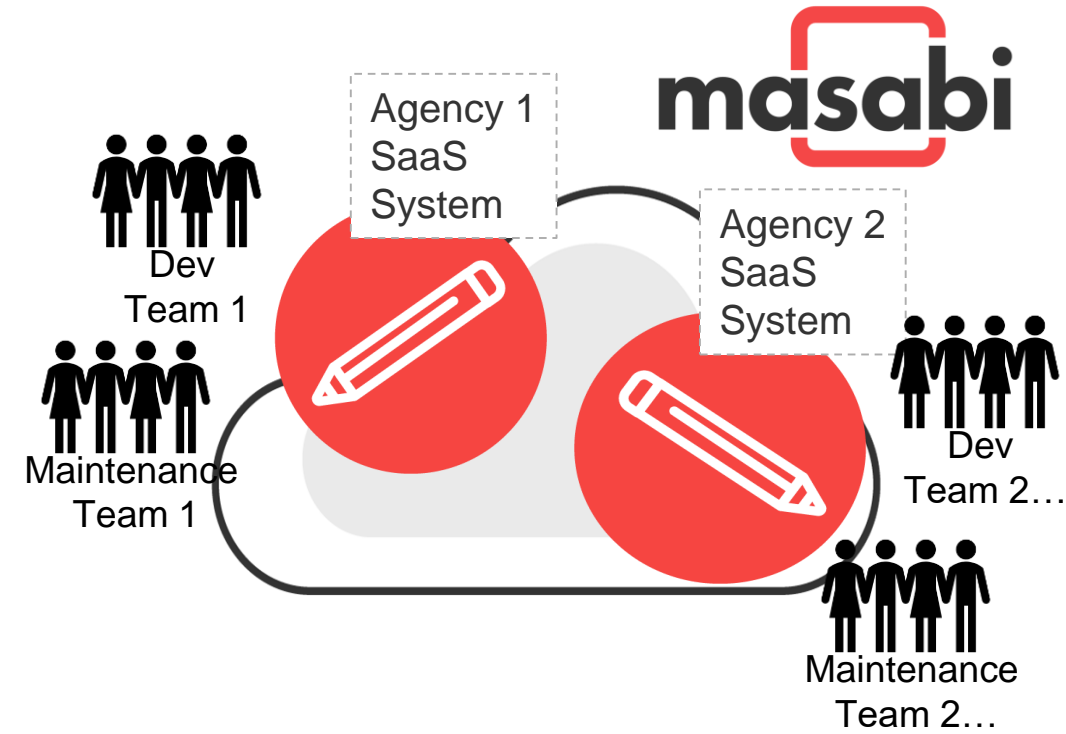


# Platform > SaaS/Cloud

- “SaaS” on its own just means the vendor is looking after the hosting of the software, often with *multiple* customised installations being run that still need separate dev activity for each Agency to deploy, upgrade and security upgrade one by one. Not Scalable.
- A Multi-Tenant **Platform** means one platform instance inside which multiple brands/tenants are configured. Means that the security fixes and platform upgrades occur across the system as a whole, not client-by-client.

**The “A Team” for dev and maintenance always works on the main platform, and isn’t prioritised to one client above another, even with 100+ clients.**

This is how to deploy and maintain *complex* fare collection in a SCALABLE way.





# Fare Payment *Platform* Benefits



**Cost-effective  
& lower risk**  
to deploy,  
maintain &  
upgrade



**Quick to Deploy**  
Takes  
weeks/months  
not years to go  
live



**Regular Updates**  
Adding new  
functionality  
available to all,  
***doesn't become  
obsolete***



**Enables MaaS**  
Mobility as a  
Service for  
public transit



**Open Integrations**  
Connects with 3rd-  
party systems  
through global API's

Always the A-  
Team

# Fare Payment *Platform* Benefits



## World-Class Services

Change management,  
support & staff  
services



## Future-Enhancement Roadmap

Removes  
complexity, guided  
by fare payments  
experts *so agency  
doesn't take the  
risk on design*



## Latest Tap & Ride Experiences

Keeping riders  
happy



## Digital-First Approach

Dematerialization,  
concessions &  
cash digitization



## Cloud-Native

World class  
scalability,  
uptime, security  
& redundancy

# Fare Payment Platform Disadvantages



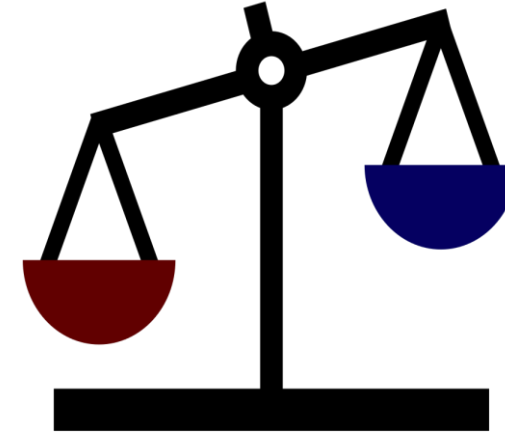
- Low cost access to existing features, **but** high cost to add new features that aren't on platform roadmap, other than enhancements using API/SDK
- No on-premises hosting
- Less work for SI
- IP ownership **very** unlikely to be offered
- Usage based fees align incentives, but scale with usage.



# How to Procure FPaaS?



- RFP focus on high level goals
- Reduce specifics on functions and workflows, or specific technologies to be employed.
- Flexibility for vendors to suggest alternatives that achieve similar outcome
- Embrace Pareto 80/20 rule on mandatory requirements, ***keep nice-to-haves as costed options***
- Encourage alignment of KPI's and Remuneration



- Less detail and work in writing RFP
- But....
- Far more work in comparing variety of RFP responses and scoring likelihood of vendor success on core functionality, and FPaaS platform long term viability



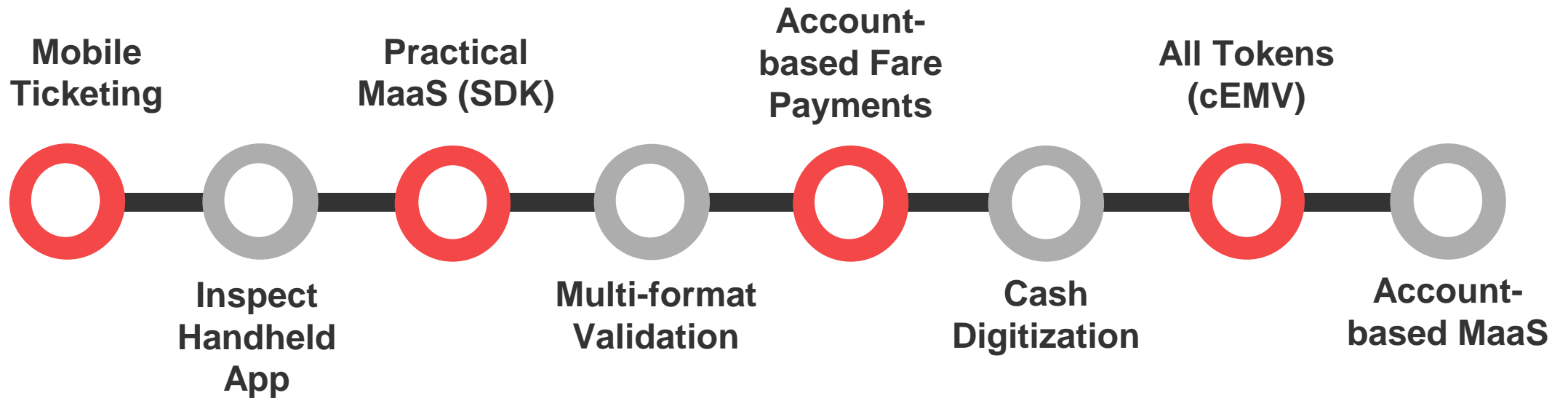
# How I learnt to stop worrying ....and love FPaaS

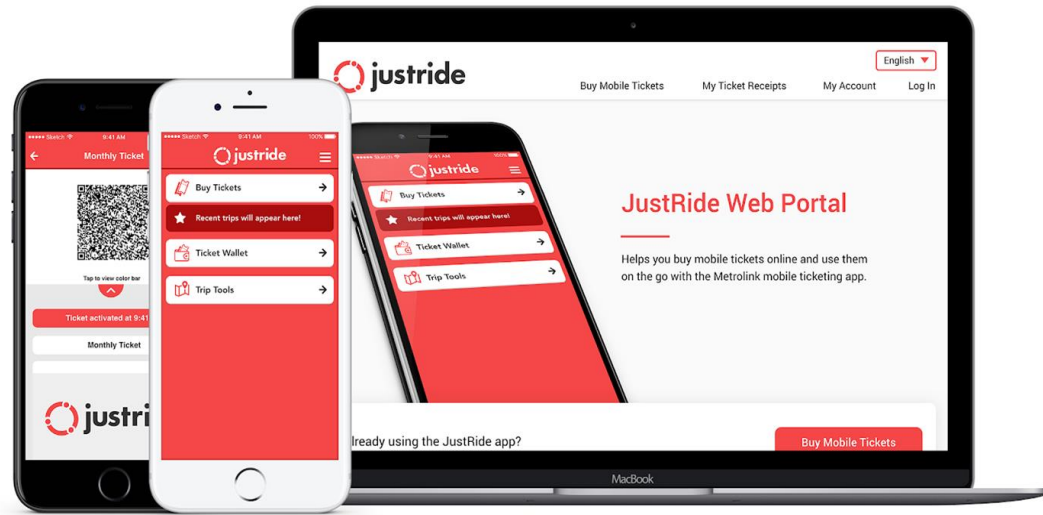


# The Low-Risk 'Mobile First' Journey



Masabi is moving some agencies along the path to FPaaS using our 'Mobile First' approach





# Fare Payments as a Service

## Any Questions?

twitter: @benmasabi  
email: ben@masabi.com  
www.masabi.com

## Stand D32

