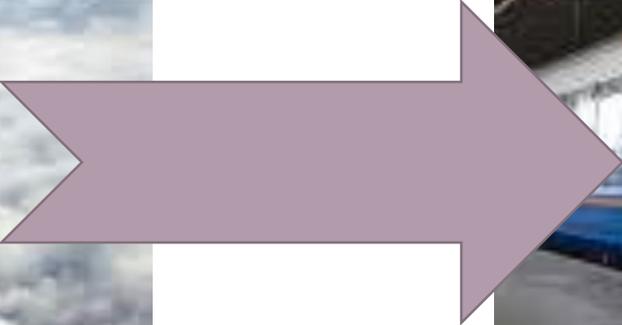


The long rail journey

Lucy Dean, Head of Revenue and Retail, East Midlands Railway

The wonderful world of rail





So what is the difference?!

Air	Rail
You know who get's on, where, what route they've travelled, where they booked, what they paid (or what you'll receive)	You have some idea of passenger numbers per train but little knowledge on where they booked, travelled from, or paid
You can calculate revenue and profit on a flight by flight basis	It is very difficult to evaluate the profitability of a specific service
You set your own prices	A lot of fares and their increases are regulated by the DfT and received significant public scrutiny
You can change your prices as often as you like	You can changes fares 3 times a year
You can offer exclusive fares through your own retail channels	Permanent fares must have retail parity i.e. Be available through all channels
You can cancel services with limited demand (subject to meeting slot retention rules)	You are obliged to run services as a public transport provider
You can develop your network	Your franchise dictates what you operate

```
graph TD; A[Output - Analysis] --> B[Input - Data]; B --> C[Optimisation]; C --> A;
```

Input - Data

Output -
Analysis

Optimisation

1. Input - Data

How do you Revenue Manage with incomplete data?

What do we know?

$\frac{1}{3}$ Advance Purchase

$\frac{2}{3}$ Walk Up

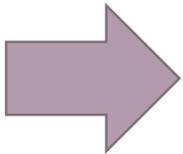


How can we build the picture?

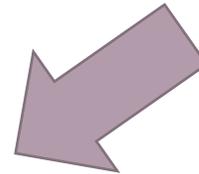
Timed sales at the station



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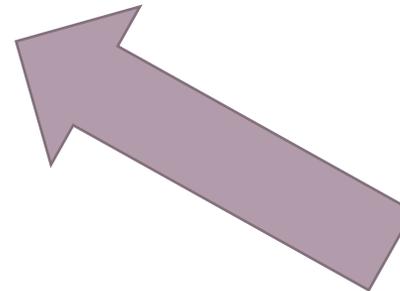
2/3 Walk Up



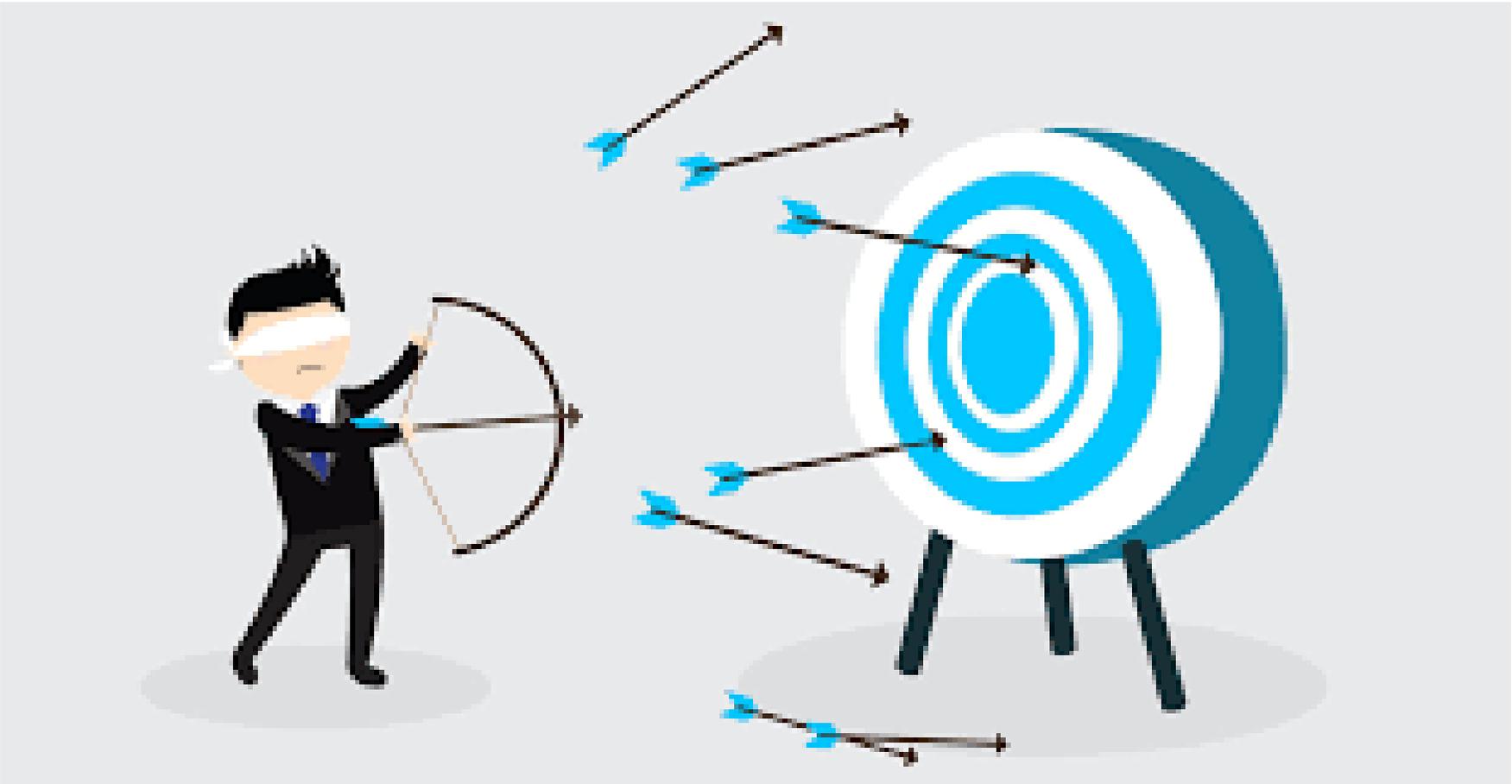
Gateline data



Passenger counts

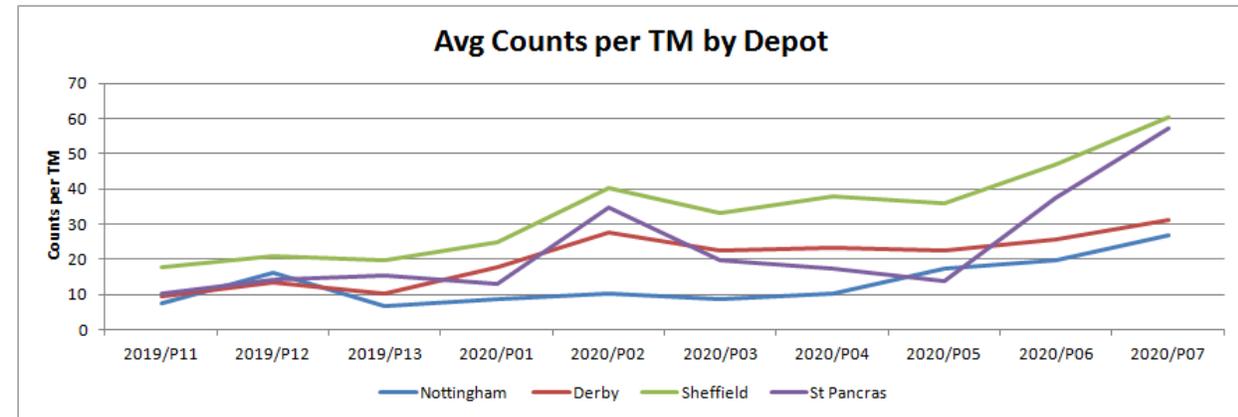


The result.....



How have we improved the data quality?

- Make better use of current Reservations Systems and enhanced product set
 - “counted places” allow you to sell advance tickets and so capture ticket information without offering a seat on services where seats are not allocated e.g. local services
 - Advance Purchase on the Day (APOD), break with the tradition of only selling advance fares until 23:59 the day before departure to a) retain full revenue and b) capture better data
- Encouraging manual passenger counts
 - Only 1/3 of our trains have automatic passenger count technology, for the remainder we rely on our Train Managers and Conductors
 - Our RM team have spent significant time with on train teams to encourage counts, the message is “help us to help you” i.e. don’t complain your trains are too busy or too cheap if you can’t evidence it!
- Smart ticket data:
 - Barcode and Smartcard tickets allow you to capture more data with scans captured at platform validators, gatelines, and onbaord



What next?

- Enhanced Reservations Systems
 - The industry is delivering a new reservations system which should deliver more automation and better control – unlike other industries we do not have a choice of distribution system!
 - Installing more Automatic Passenger Count technology
 - All of our new trains will have automated passenger counts
 - We are working with our systems suppliers to improve the data quality on local services to ensure we can monitor each individual trains loads
 - Continued and enhanced Smart ticket data
 - We will continue to increase the use of Barcode and Smartcard tickets by enhancing the proposition and awareness
 - This will continue to give us richer data and may ultimately allow us to actually retain revenue for each customer who travels with us rather than using an arbitrary split across operators
-

2. Optimisation

A new RMS

It's not all singing and all dancing, but it is a step forward for us!

- Our current RMS forecasts demand but doesn't make recommendations
 - As such we manage by business rules to set strategy and critical rules to flag trains for attention
 - This results in too much manual intervention and a system which does not learn quickly when customer behaviour changes

 - We are in the process of implementing a new RMS which will optimise
 - The key is ensuring that our analysts trust the system recommendations and so make use of the optimisation module and do not continue to over manage with business rules or overrides
-

3. Output - Reporting

Reporting enhancements

What we did:

- Previously Revenue Management analysis involved slow and resource intensive extraction of data from our Revenue Management database followed by analysis in Excel
- We created an automated data transfer link from our Revenue Management database to a separate data warehouse which we link to BI software (Tableau) for analysis

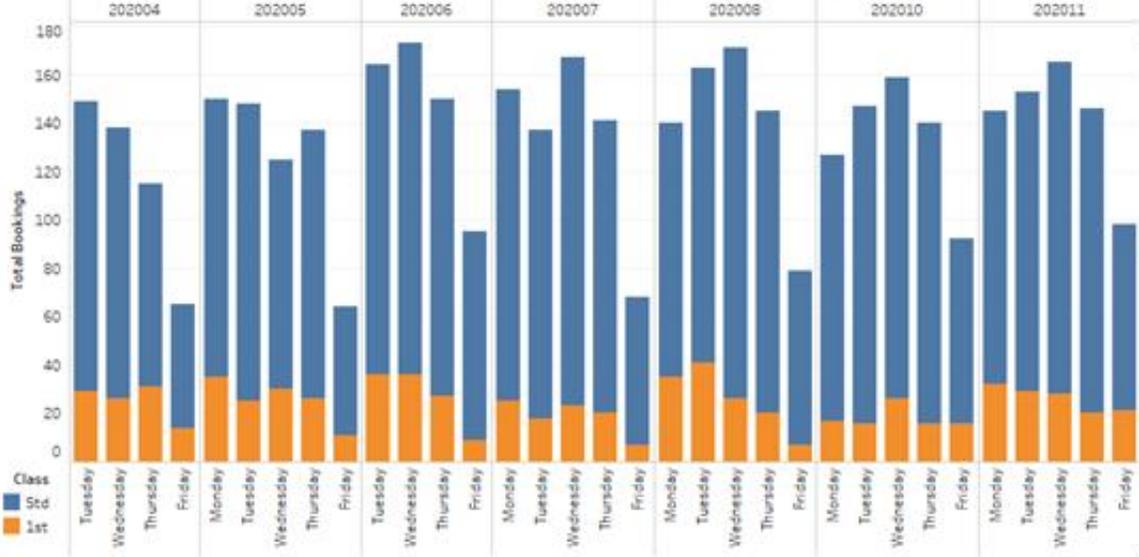
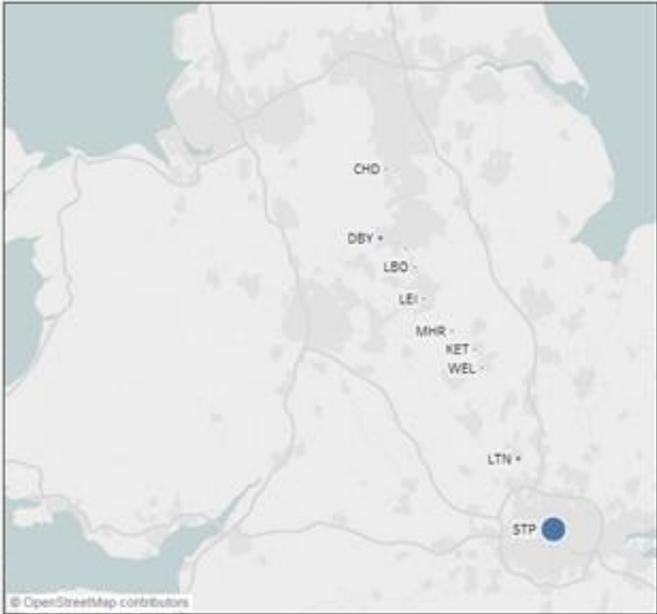
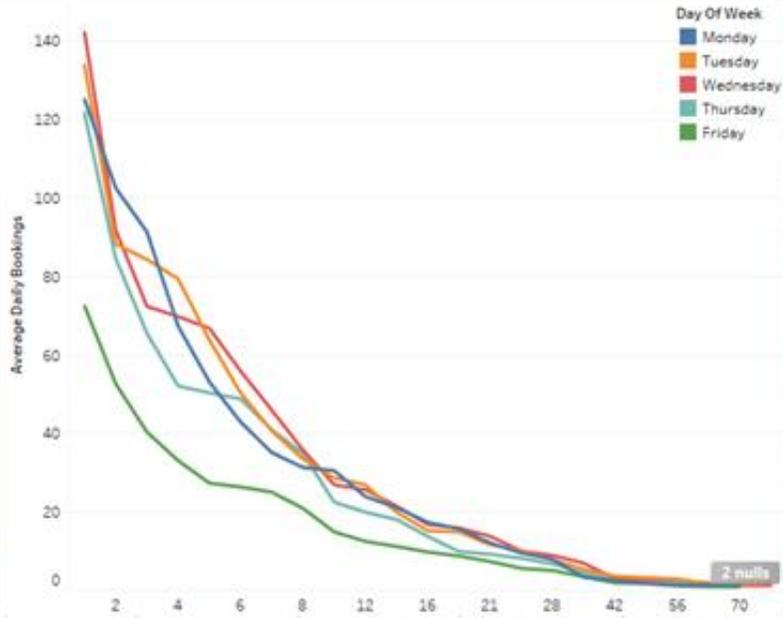
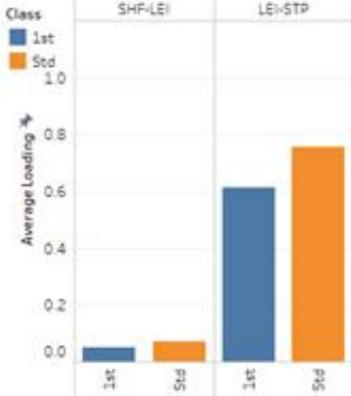
How we use it:

- The new system is used to analyse key Revenue Management metrics in a format chosen by the analyst, giving them the data they need, in the format they need it, whenever they need it

Benefits:

- Automated data collection – analysts spend more time on analysis and revenue generative interventions
 - Intuitive to use – minimal training required
 - Scalable – in terms of users, processing power, and consumption of multiple data feeds
 - Cost efficient
-

Clas.	Day Of W.	Rule Name
1st	Mon-Thu	May19_LON_SX_FG
	Friday	May19_LON_SX_FF
Std	Mon-Thu	May19_LON_SX_SJ
	Friday	May19_LON_SX_SI



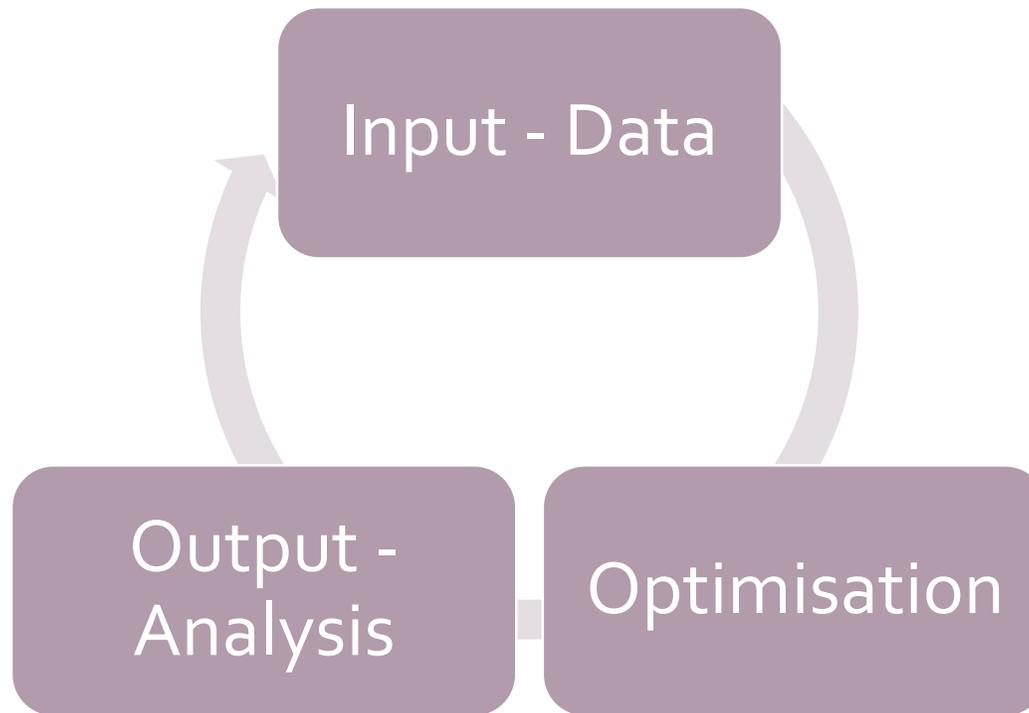
Class	Yield Group	Day Of Week				
		Monday	Tuesday	Wednesday	Thursday	Friday
1st	FW	7	8	9	8	3
	FH	22	19	19	14	1
	FG				2	7
	FF					3
	Total	29	28	28	23	12
Std	SW	59	65	68	59	26
	SJ	53	54	58	53	1
	SI		3		1	41
	SG					1
	SF	3	4	3	5	2
	SB		1	1	1	
	Total	114	124	129	116	68

What next for reporting

- Additional data feeds
 - We want the business to add their data to Tableau so we can do more correlation analysis
 - Candidates for additional data include performance, complaints, customer satisfaction, car parking revenue, CRM data
 - Use across the business
 - We want everyone to own and understand revenue performance
 - Tableau is user friendly and so allows us to give access to colleagues in other functions to access their own data
 - Insights and data ownership
 - The evolution of our data set will require ownership of data
-

Conclusion

We've improved each area



But, there's still a way to go



And even if you get everything perfect, our customers continue to change!



Changing work patterns

- Part time and flexible working is changing commuter travel patterns
- We must provide additional products to meet customer needs or risk modal shift



Economic uncertainty

- Businesses are on hold or trying to save costs
- Travel policies are changing, more conference calls and no flexible tickets



Environmental concerns

- The environment has become part of a customer's decision making process
- This can be capitalised on but a strong marketing message is required



Changing expectations

- Customers expect an "on demand service" and do not want to engage with a human!
- Our retailing solutions must meet that need

