

Developing an Award-Winning RMS for Passenger Rail

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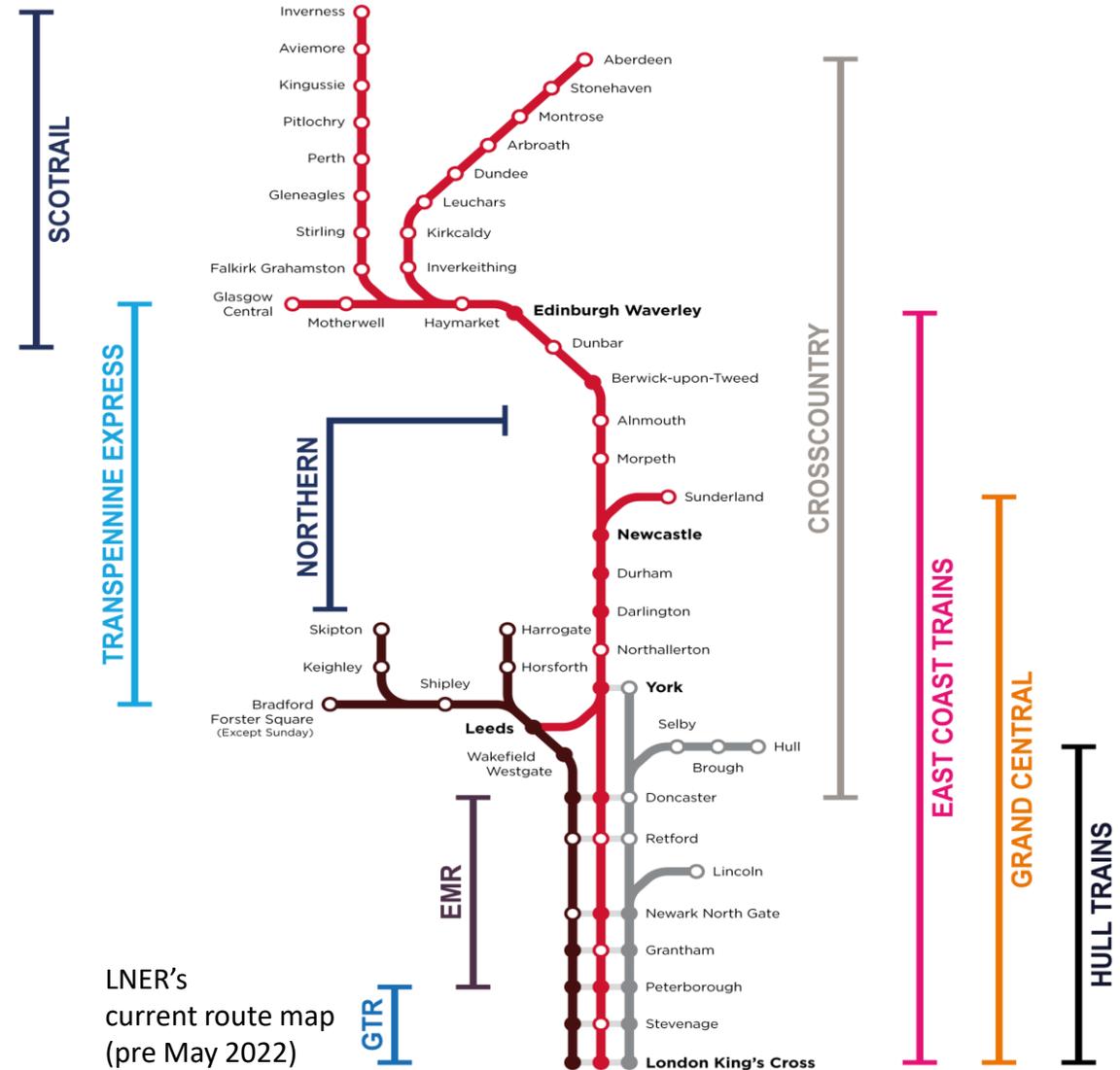
LNER
LONDON NORTH EASTERN RAILWAY



London North Eastern Railway

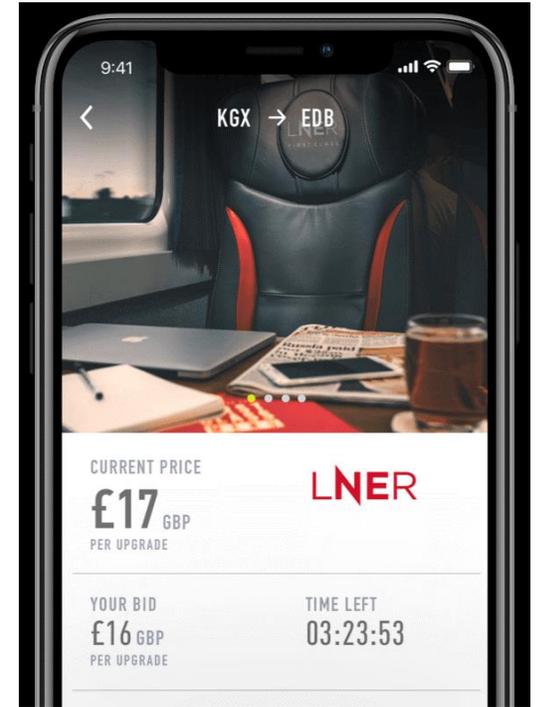
A busy route

- Long distance, high speed train services between London and the Scottish Highlands – 54 separate calling points
- Pre covid – a £800m business, over 20 million journeys per annum
- 30% of UK population live along this route, contributing over £570bn per year to the economy



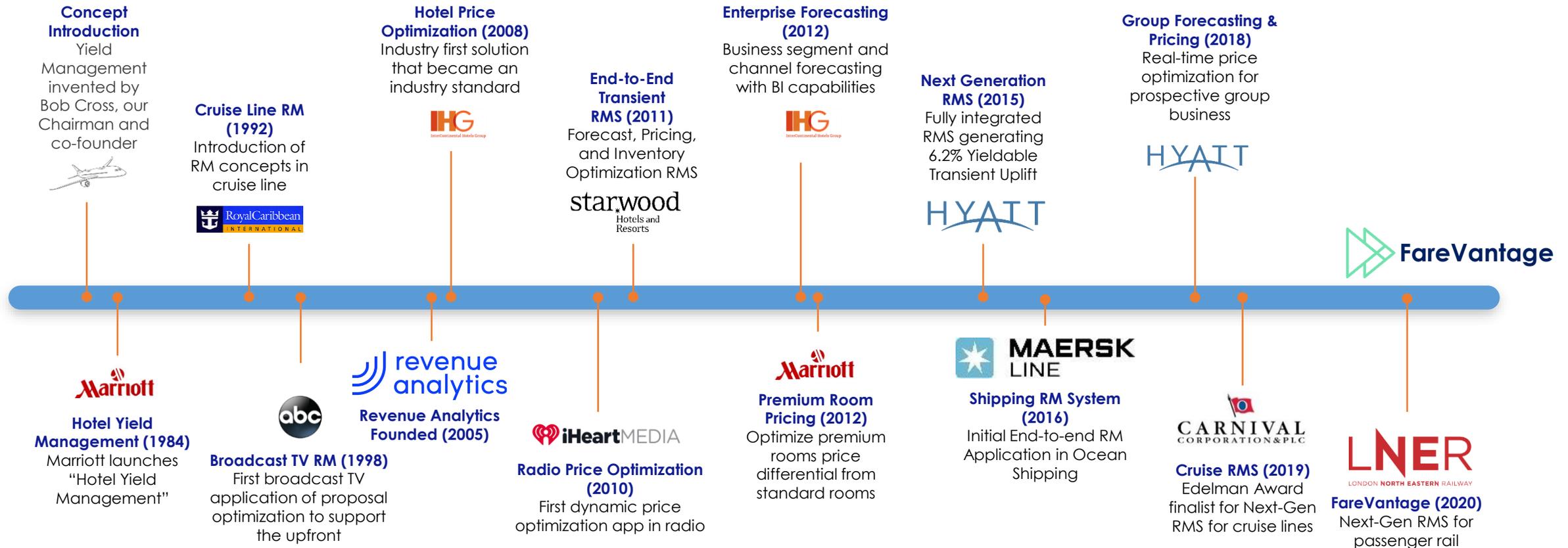
Customer Focused Innovation

- New LNER Mobile app
- Launch partner for Seatfrog – bid for first class upgrades
- Infrared Seat Sensors
- LNER Perks – a brand new loyalty programme
- Auto Delay Repay
- “Eat at your seat” – mobile based food ordering
- **State of the art RMS – “ROSE” powered by Revenue Analytics**



Origins of Partnership

Our leadership is responsible for dozens of pricing and Revenue Management “firsts”



System Aspirations

Bespoke

Built from scratch to fit our business

Business
Reasonable

Designed to suit varied business requirements

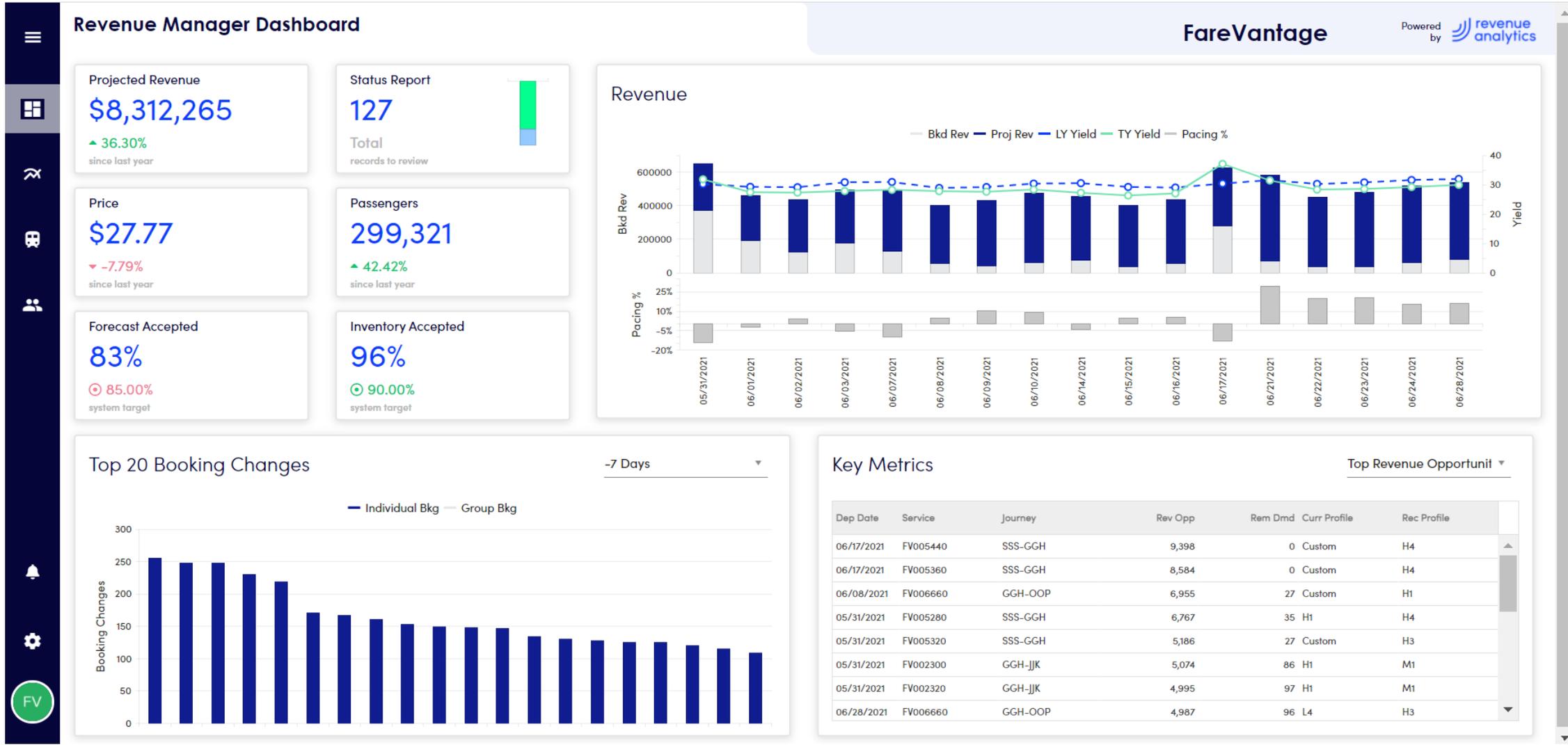
Customer
Focused

Today's customers are switched on. It needs to align with their needs

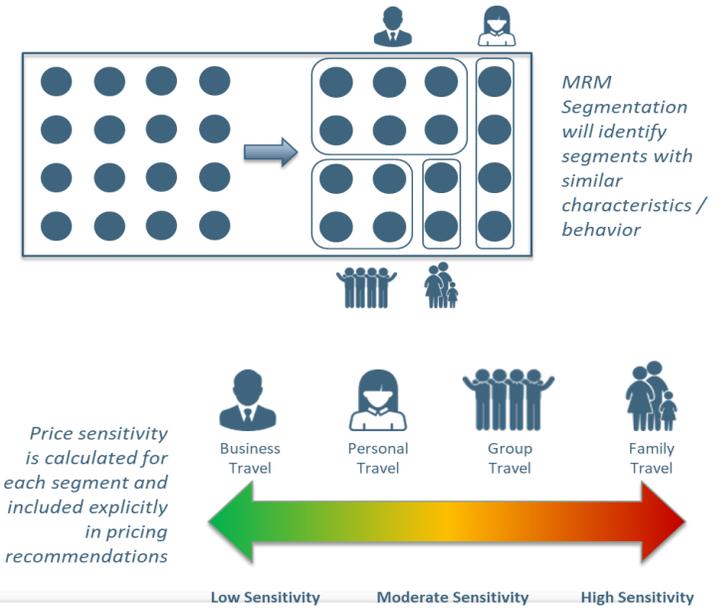
Fit for the Future

The world isn't standing still and neither is LNER

Key Technologies - Workflow



Key Technologies – Forecasting & Elasticity

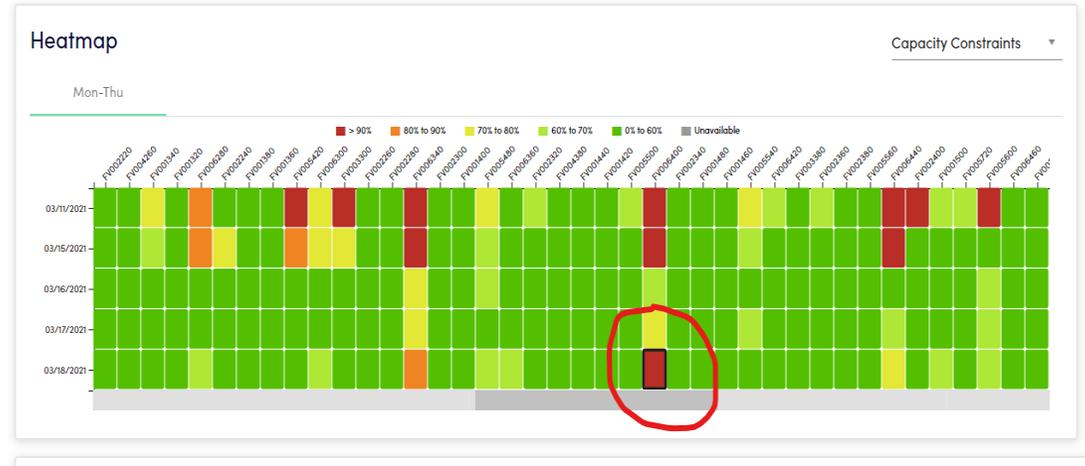


Metrics: Projected Demand Pacing Projected Yield LY Final Yield

<input type="checkbox"/>	Date	Service	Journey	Fcst Conf	Sp Events	VLY Dmd Pace	LY Adv Bkgs	Bkd Ind Dmd	Bkd NonFcst Dmd	Fcst Rem Dmd	Fcst Total Dmd	Proj Bkd %	Proj Rev	Proj Rev Pace	Proj Dmd Pace	Proj Yield	LY Final Yield
<input type="checkbox"/>	3/15/2021	FV003000	WWW-GGH	🟢	0	5%	177	156	0	38	194	111%	\$5,093	11%	10%	\$26	\$26
<input type="checkbox"/>	3/16/2021	FV006580	GGH-SST	🟢	0	-12%	204	162	0	38	200	112%	\$3,006	-1%	-2%	\$15	\$15
<input type="checkbox"/>	3/18/2021	FV001180	PPQ-GGH	🟢	0	-3%	184	162	0	38	200	102%	\$5,848	7%	9%	\$29	\$30
<input type="checkbox"/>	3/15/2021	FV001080	QQQ-GGH	🟢	0	-18%	208	154	0	37	191	111%	\$3,325	-11%	-8%	\$17	\$18
<input type="checkbox"/>	3/16/2021	FV006140	SST-QQQ	🟡	0	-12%	195	158	0	37	195	107%	\$5,152	5%	0%	\$26	\$25
<input type="checkbox"/>	3/15/2021	FV003010	QQQ-WWW	🔴	0	-5%	169	146	0	36	182	104%	\$5,189	8%	8%	\$29	\$29
<input type="checkbox"/>	3/16/2021	FV003010	PPQ-GGH	🟢	0	-6%	190	150	0	36	186	109%	\$5,104	5%	-2%	\$27	\$26
<input type="checkbox"/>	3/17/2021	FV001040	WWW-GGH	🟢	0	-6%	202	164	0	36	200	110%	\$5,752	1%	-1%	\$29	\$28
<input type="checkbox"/>	3/17/2021	FV001060	SST-GGH	🟢	0	-15%	192	147	0	36	183	101%	\$4,957	-6%	-5%	\$27	\$27

Key Technologies - Optimization

Inventory Workbench



7000 (ABC - SDC) Override

Bucket	Booked	Recs	Current	Override
B1	0	250	250	250
B2	0	250	250	250
B3	0	250	250	250
B4	7	0	250	250
B5	40	0	250	250
B6	35	0	155	155
B7	20	0	80	80
B8	0	0	30	30
B9	0	0	0	0
B10	0	0	0	0

Pacing
51% Booked
102 / 250

Sensitivity
Low
Proj Yield
£58.31

Competition
15% LY Yield
£48.20

Recommended Profile: H4

Current Profile: H1

Select a profile

H2

H3

H4

H1

M1

L1

L4

L3

L2

Override Watch Override Ignore

Reminder date: day/month/year

CANCEL
OVERRIDE
APPROVE

Timeline: F1006400 03/18/2021 - GGH - SST - PFO - QOO - AAG - QOR - KKK - OOO - OOP - LLM - BBB - SSS

Metrics: Daypart, Fcst Confidence, Rev Pacing

Status	BR	Journey	DP	Fcst Conf	OTB	Rem Dmd	Excess	Alloc	Available	Sensitivity	Comp Pct	Flex	Curr Profile	FV	Lead Bucket	Reason	Ref Price	Proj Yield	Proj Reven...	Rev Pacing	Last Update	
✓		OOP-SSS	OP2	🟢	35	15	143	193	158	Low	-3%	0	L4	L2	PD		\$16.42	\$18.57	\$636	54%	03/10/2021	
✓		GGH-OOP	OP3	🟢	45	5	100	150	105	Low	2%	1	H4	H4	GU	PCH	\$52.79	\$65.36	\$2,615	101%	03/10/2021	
👁		GGH-SSS	OP3	🟢	20	9	27	56	36	High	7%	0	L2	Custom	GU	PCH	\$58.29	\$55.60	\$1,612	82%	03/10/2021	
✓		GGH-AAG	OP3	🟢	20	9	21	50	30	Low	10%	1	M1	H3	GA		\$33.43	\$42.16	\$548	106%	03/10/2021	
✓		GGH-SST	OP3	🟢	31	6	10	47	16	High	-5%	1	L1	L3	PD		\$16.16	\$23.82	\$226	96%	03/10/2021	
		GGH-OOO	OP3	🔴	1	3	31	35	34	High	9%	0	H1	H1	GY		\$52.25	\$71.00	\$249	110%	03/10/2021	
✓		LLM-SSS	OP2	🔴	9	0	23	32	23	Low	-10%	0	L4	L2	PD		\$12.84	\$13.68	\$123	111%	03/10/2021	
✓		BBB-SSS	OP3	🔴	0	9	23	31	31	Low	5%	0	L4	M1	GX		\$11.66	\$13.90	\$122	259%	03/10/2021	
Total					171	132	621	922	754			13								\$8,715		

Bringing It Together

LNER has a fairly typical approach to revenue management:

Strategic Approach

- Baseline strategy
- Stable, iterative approach
- Underpins the revenue management strategy

Tactical Moves

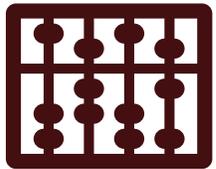
- Unexpected demand patterns
- Special Events
- Competitor moves
- Group travel
- Promotional activity

What did we learn?



Teamwork

- Face to face interaction is critical
- A strong relationship – even outside of work



Fitting the Math to the Business

- Revenue optimisation is key – but its not the whole story
- Focus on limiting business rules – letting the system do what it's designed to do



Overcoming Obstacles

- Covid – an unwelcomed hurdle!
- Managing revenue maximisation with customer and political expectation

Proven Results

Market test performed and validated by an Independent audit

35%



**Reduction in
forecast error**

3%



Revenue Uplift

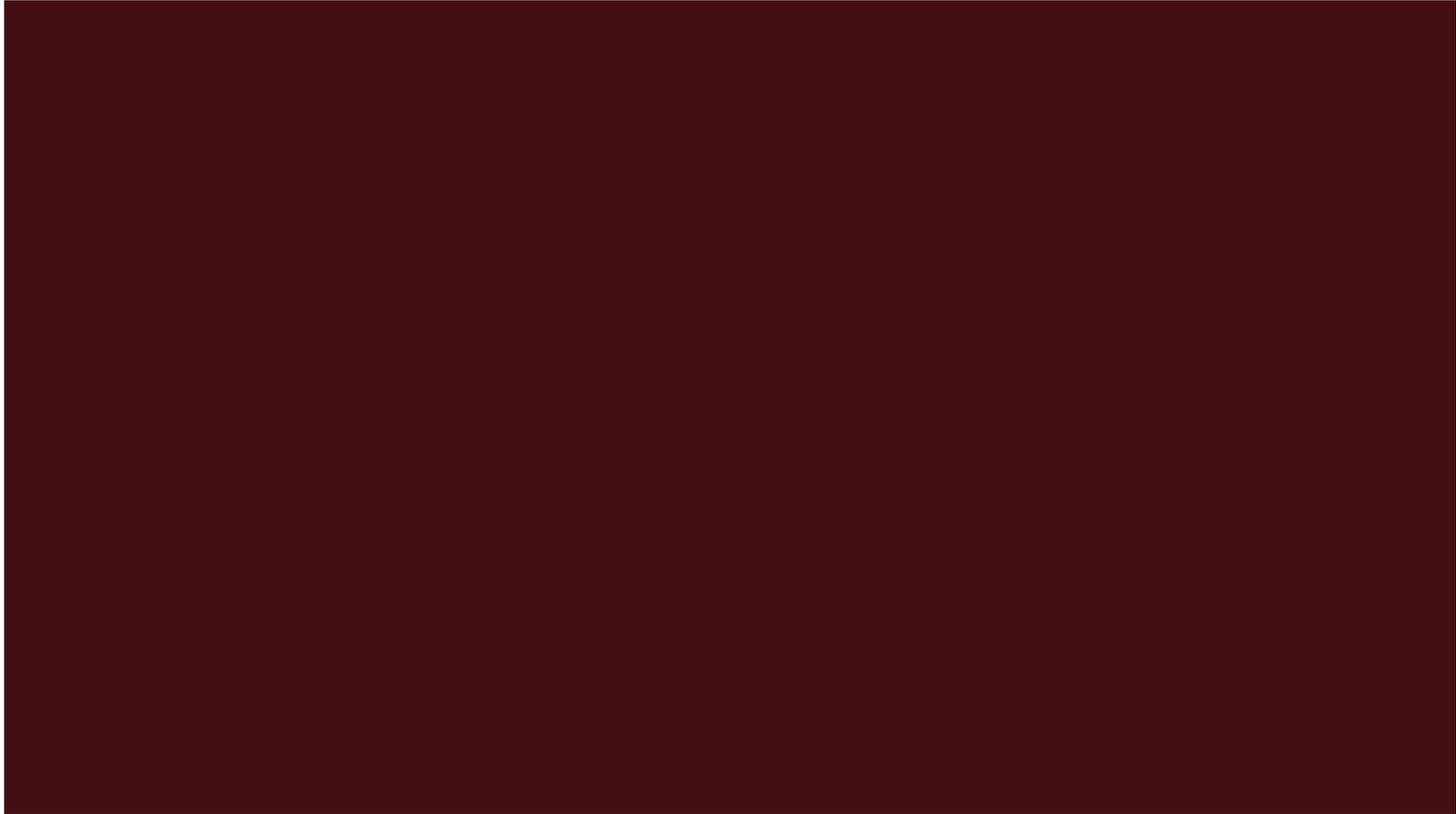
15x



**Return on
Investment (3 Yrs)**



Video





Developing an Award-Winning RMS for Passenger Rail



Q & A

Thank You

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