

# How Greater Anglia's train planning team rewrote the timetable almost overnight

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The coronavirus crisis has brought about sudden changes for train operating companies timetables, what would be a logistical nightmare even with months of planning.

In a matter of days, due to staff self-isolating and changes to travel patterns, timetables had to be ripped up and vastly amended services brought in to keep key workers moving and essential journeys to be made.

Planning such vast changes in a matter of months would be a logistical nightmare, but having to do this in a matter of days is unthinkable.

Keith Palmer is Greater Anglia's Head of Performance and Planning and has offered an insight into how the team have overcome the challenges.

He said: "It was a major challenge achieving the amended timetable when the position is changing daily, social distancing advice needs to be followed and other colleagues at Greater Anglia are having to self-isolate.

“It is also worth highlighting that it usually takes a full year to plan a new timetable. In response to the national coronavirus emergency, we went back to the drawing board to create a brand-new emergency timetable from scratch virtually overnight.”

This was no mean feat for the team of 15 who had to take into account planning for increased staff absences across the network, the need to reduce services whilst ensuring that key workers could get to work, and at the same time running enough trains to avoid overcrowding and maintaining social distancing.

Add to this the team themselves grappling with the new challenges of working from home, juggling childcare and home schooling.

Keith said: “The first week was full on. Usually emergency timetables are implemented through Control arrangements. So, for example, during major disruption the Control Room will put in a temporary timetable to cope with that specific situation.

“But we couldn’t do that this time because we needed to go back to the drawing board and start from a blank sheet of paper for the whole network.

“The closest previous parallel for this situation was the Beast from the East, but that was more about adjusting the existing service to prevailing weather conditions, rather than creating a whole new bespoke schedule.

“I can’t fault the way that my team has risen to the challenge, putting in the many extra hours necessary to create a whole new timetable virtually overnight.”

Like every train operating company, Greater Anglia has seen a drastic reduction in the number of people travelling, as people heed government advice to avoid non-essential travel in the light of the coronavirus outbreak.

But how do you revise the service from 1,366 trains a day to 836; reduce the number of drivers needed by 30% and conductors by 47%, and yet still hitting a punctuality rate of around 93% to 97%. Keith explains more.

### **Rewriting the timetable**

“Planning a timetable is like doing a jigsaw or building lego – everything has to fit together.

“Every bit of a timetable is mathematically calculated. For example, the time a train takes to get from Norwich, to the next junction, to the next station and so on, is a set value.

“For the entire network, these values are fixed and recorded in a document agreed with Network Rail called the Train Planning Rules.

“So you just start building. Sometimes you have to go back and change something because it doesn’t fit

and eventually you'll end up with the solution where everything fits everywhere as best it possibly can.

"And that's why when you do a normal timetable change it can take a year to develop. Because you're trying to fit all these lego pieces in and then you've got to think about platform availability at key stations, stabling, fuelling, are there enough drivers in those locations, freight trains and other operators.

"So there are so many bits of the jigsaw that come together. It is incredibly complex. It really is a very difficult thing to do.

"Greater Anglia's emergency timetable has been rewritten to ensure that, despite the service being reduced, every station has the right level of service, with the correct frequency to avoid overcrowding and enable people to socially distance as much as possible, whilst at the same time making the train service as efficient as possible.

"The freight trains that also run on the network in East Anglia haven't changed their timetables, as they are still carrying essential supplies, so we also had to work around their schedules.

"Once the timetable is planned, we generate the train and crew diagrams (a description of what each train, driver or conductor does each day), which must be done in line with agreed employment terms and conditions.

"The timetable is agreed with Network Rail and then uploaded into the national system ready for the first day of operation.

"The national system is what provides train times information to the Greater Anglia app and other journey planning websites."

### **What makes a good train planner?**

"We have a team of 15 people working in Greater Anglia's train planning team. Each has their own specialisms, expertise and knowledge of particular routes.

"One team works on West Anglia, one on the Great Eastern mainline (everything south of Ipswich and services to Southend) and one on Intercity and regional services.

"But we all have one thing in common – a laser-like eye for detail.

"Our job involves amending hundreds and hundreds of trains and station stops, to create schedules that best fits customers' needs and allow key connections to be made.

"Just one mistake could result in less convenient journeys or even service cancellations. We also need to build a plan that enables regular maintenance and fuelling for trains, as well as scheduling of train crews, so there are huge numbers of inter-connecting factors to be taken into account, all of which are important. That painstaking focus on every single element is essential.

“We learn a specific skill in an area of the business. One can write timetables on West Anglia, another can do train diagrams on the Great Eastern mainline, or train crew diagrams on the rural patch.

“You never learn everything. So there might be nine disciplines within the team and you might be proficient at three of them and because the geography and the nature of every single route is different – different drivers’ terms of conditions, different rolling stock, different layouts of route – everything is different on every route. So there’s a scale of competency within the team – you can’t do it all.

“Their attention to detail and accuracy is phenomenal. You have to be fixated on the detail because you can’t cut corners. We do a lot of testing during recruitment before people can become train planners to identify whether they’ve got that eye for detail.”

### **Reinstating a normal service and planning for engineering work**

“Even though we now have a revised timetable, the normal timetable still sits behind everything. It is remains in the national system, so that once it’s appropriate to put it back in to place, it can be reinstated as quickly as possible.

“Our teams will need to plan to ensure that there are enough staff available, and that trains and train crews are in their correct locations to enable all the missing trains to be reinstated, as well as working in partnership with Network Rail, to give them the appropriate notice of our intention to start reinstating the service.

“For the time being though, the reduced timetable will continue, and further changes to services may become necessary, depending on how the wider coronavirus situation develops.

“We also still have the ongoing alterations linked to essential engineering works to manage and schedule, with all the train service and rail replacement requirements that these planned projects entail.

“Normally the train planning changes associated with such works are prepared 16 weeks ahead, so changes can be uploaded into passenger information systems 12 weeks in advance. But in the current climate, there is an increased likelihood of unavoidable shorter notice alterations. Either way, we are ready to prepare the next set of schedules.”

### **Planning for customers and communities**

*The Greater Anglia train planners fulfil one of those unseen, but crucial, roles in making the railway work well. Just like their front line colleagues, they are passionate about their contribution in ensuring customers and communities can travel conveniently and reliably around the region. They are also justifiably proud of the part they are playing in providing a service for key workers and enabling other essential journeys during the current situation.*

*Photo credit: Greater Anglia (photograph taken before social distancing guidance)*