The Clairvoyant Airline

The ‘Clairvoyant Airline’ will have faster growth, a sweeter revenue mix, more flexible operations, better customer service and happier, more profitable customers than peers who take a more traditional approach to digital transformation. Put simply, a clairvoyant airline uses data to see and act on problems and opportunities before they emerge.

The customer habits, the analytic power and the data needed to realise this vision all exist today. So does the financial imperative: in an industry where sweating out marginal gains takes substantial effort, the benefits of ‘clairvoyance’ are meaningful to any airline – between 5-10% points of margin improvement.

However, attempts to establish the ‘clairvoyant airline’ are likely to prove expensive failures unless airlines think differently about how they allocate capital and how they drive change programmes that reflect the underlying mind-sets and motivations of their staff.

You don't have to look far these days to find an organisation that is trying to use data and advanced analytics to improve their customers' experience and drive operational efficiency. In a wide variety of industry sectors across the globe, market leaders and new entrants alike are investing in data-driven innovation. This is particularly relevant for airlines. The opportunity in this sector is, however, much more substantial than it first appears: we call it 'the clairvoyant airline'.

For the last few years there has been considerable media hype about 'big data'. We believe that the real value from 'clairvoyance' will be found in three areas.

First, it enables customers to go fully digital by giving them ways to interact with the airline in real time on the issues that matter to them. This goes beyond the helpful innovations like smartphone check-in or RFID-tagged luggage. As customers take more control over the way they want to interact with us, airlines will need to ensure they can really understand, and predict, what an individual customer will want either when, or before, they contact us. This won't just reduce the cost and increase the quality of your customer service; it will also help drive ancillary revenues.

Second, the 'clairvoyant airline' will use data analytics to inform better decisions in operations by providing real-time information from multiple sources to front-line employees in a single tool. An airline makes thousands of decisions every hour to keep the network running smoothly. Almost all of those decisions are based on imperfect information. What if an airline could base all of its decisions on real-time, statistically significant data drawn from across the organisation? For example, do you hold a flight for a delayed connecting passenger? Imagine there are 10 connecting passengers who are on an in-bound flight and who risk missing their onward leg. Today, operations may judge that it is about 15 minutes connecting time from their arrival gate to their departing flight, so the decision is made to hold the aircraft for them. In reality, it takes the passengers 28 minutes to transfer and their bags 32 minutes. Although not far wrong the operations estimate was inaccurate enough to cause the departing aircraft to miss its slot. This caused a longer taxi, sub-optimal routing and then a holding pattern at the destination airport. In the end the flight entered the 'red zone' for the on-bound connections of eight other passengers. The fuel and customer satisfaction cost of this judgement-based decision is substantial. In the clairvoyant future, the operations team will know that the in-bound aircraft will arrive at gate C6, that the average historic walk time from C6 to the connecting flight's gate is 27 minutes and 34 minutes for bags (and that those bags are held in the fifth container on the in-bound aircraft). They will also know the cost of accommodating the connecting passengers if they let the connecting flight depart on time. They will know in advance the connection details of passengers on the departing flight and the frequent flyer status of the passengers who could be affected at either end of the journey. With this information they can make a data-based decision on whether to hold the flight or not.

Finally, the 'clairvoyant airline' creates on-going productivity improvements by being better able to predict disruptive events that are today considered random. For example, if a cockpit warning light can be resolved 80% of the time by one of three parts, why not have those parts waiting for the aircraft on landing? Why not have the cart inventories continually updated with the parts that would resolve the most-frequently occurring issues most of the time? When warning lights appear, why not begin the process of completing the paperwork whilst the aircraft is in-bound, and why not inform operations about the historic average length of time it takes to correct faults when that warning light is triggered so that an early decision can be made about whether to change out the aircraft or alter its boarding time?

Many of these specific examples may seem obvious, or things that airlines are doing already. The difference between today's airline and the 'Clairvoyant Airline' is that in the future an airline will be able to make thousands of these interventions every day in an automated, consistently accurate way. There is a big leap from the judgement-based decisions of experienced staff on individual flights to the industrialisation and provision of insights and recommendations to the front-line across the thousands of decisions that need to be made every day. The difference could be worth 5-10% points of margin improvement.

Now, all of this would be very exciting, but the fact is that the industry has been talking about things like this for years. This is not an industry without vision and ideas – why aren't we doing more?

Why aren't airlines moving faster?

It is too easy to cite IT as the barrier to achieving the 'clairvoyant' vision. Certainly, many airlines have legacy IT systems that don't talk to each other perfectly, and functional structures that lead to data silos. Unless two other underlying barriers to 'clairvoyance' are addressed, however, attempts to create it will be an expensive failure. First, because the benefits of 'clairvoyance' come from the aggregate impact of thousands of micro decisions there needs to be a business case that reflects the macro vision rather than the specific incremental actions that will be taken. Business cases where the benefits span functions and where it is hard to link specific actions to investments are typically harder to approve and implement. Both of these complications are inherent in the 'Clairvoyant Airline'. Second, creating data-based predictive insights can be emasculating to the employee whose professional pride comes from 'fire fighting' and 'finding the best solution under pressure'. If we think about the kind of people who work in airlines, then we can all recognise the type who thrive on resolving minor crises every day. If the impact on the motivation and mindset of critical employees is not properly considered, then clairvoyance may be rejected by the very staff needed to make it work.

If the prize from 'clairvoyance' is substantial but fragmented and may be perceived to undermine many of the things that attracted airline employees to their roles, then how should airlines go after the 'clairvoyant' vision? Digital transformation is not about technology but about real-time use of data on the front line. So, any approach must start with a real, tangible business problem and its impact on the P&L: how can we improve aircraft utilisation, drive net promoter scores or reduce flight operations costs? Half the battle will be in winning the organisation round and creating momentum for change. So find quick use cases, bias yourself towards action, learn as you go under the umbrella of a 'clairvoyant' vision for your airline with cross-functional buy-in. Give a small team the mandate to go ruthlessly after a few, high-profile opportunities.

Now is the time for airlines to determine how profoundly they will use data and analytic power to reconfigure their business model. There is a meaningful prize that enhance every aspect of an airline's activities from safety, customer satisfaction, operational efficiency and profitability. Although some are trying, this prize hasn't been fully captured yet because doing it properly requires airlines to think differently about how they invest their capital and the mindsets of their employees. Creating a single vision and driving short-term, pragmatic action rather than analysis is the best way to build internal alignment and capture the potential.

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