



This document is the script work to support the IATA Webinar featuring Closed Loop recorded on Wednesday, August 5 at 7am EDT.

Slide 1- John

Hi everyone and welcome to the webinar.

In this webinar, we want to strike a strategic, instead of a technology-driven picture of the industry's possible emergence trajectory out of COVID-19. As you'll hear, we wonder if digitization is, in fact, the right terminology or are we again hung up on another buzzword?

We want to illustrate that it's the business and its ecosystem processes — coupled with smart, integrated data that will be the platforms upon which the next generation of integrated, intelligent, and industry level business systems must evolve. Of course, this perspective doesn't ignore technology. It merely puts it in its place and restores the order of things.

Before we get moving, let me address a couple of housekeeping points.

Slide 2

The event is being recorded and will be available in a few days for review, and for those who may have missed the opportunity to watch live. Also, everyone is muted so that the speakers get a clear run.

Questions are encouraged, and the more we can get through, the better. Please don't wait for question time at the end of the discussion to send your questions — write your questions in the chat panel to the right of your screen as we go and we'll get to as many as we can.

We've also included contact details on the introductions screen for those who wish to get in touch after the event. Questions we don't have time to address will be reviewed by the panel in the days following the webinar and we'll endeavor to answer everyone. The webinar panel will discuss these individually and the top 10 will be published in a newsletter to all registered participants in the days after the event.

Slide 3

COVID isn't the only environment we live in, and I'm bound to point out that we're obligated to the guidelines here. Please be mindful of them when you're submitting your questions.

With that, let's get going.

Slide 4

This webinar is bought to you by IATA Safety and Flight Operations and Closed Loop Consulting.

For those that don't know them, Closed Loop is a global group specializing in strategic and operational programs for airlines and associated operationally connected segments, like airports and other interconnected supply chains. Their capability includes data integration, holistic system design and project delivery, as well as higher-level Board and senior management assurance programs.

Closed Loop has left its footprint on the industry and a few airlines over the last eleven years or so, and we're privileged to have them here today.

Slide 5

For the industry to emerge successfully from the COVID-19 pandemic, doing things the same old way won't do.

While unrelenting attention to balance sheets by CEOs will be an accepted norm for some time, we can't ignore a once in a generation opportunity to redesign the entire journey ecosystem, and with it, maybe the industry too.

Now is the time to evolve strategies, objectives, and plans to reshape the industry, the airlines, and build system efficiencies and readiness for a future that will be very different but also eerily familiar.

Slide 6

I'm John Synnott and I'll be moderating today's event and trying to keep our speakers on the topic given the range the subject of tonight's episode could cover.

Tonight, we're joined by...

... Marcus Carr, a Principal of Closed Loop, Director of Projects and the SME for digital data and data integration.

Marcus' 30 years of experience ranges across projects dealing with complex data sets covering civilian and military aviation, legislation, mortgage lending, telecommunications, drug and medical data, case law, technology and almost everything in between.

Knowledge of data systems has been fundamental to Marcus' success in project management. He has spoken at numerous conferences, particularly dealing with the delivery of critical data sets in time-critical projects. Marcus is a PRINCE2® Practitioner and a firm believer that project management is a human task, not a software function.

Michael is a recently retired long-haul Captain with over 44 years and almost 25,000 hours of aeronautical experience across Airlines, Business and General Aviation, and Training.

Mike flew the A380 for the decade into his retirement and has also flown 10 years on the 747-400 on long haul ops and another 10 on the B767 on a mix of long, and short-haul ops.

During his career, Mike chaired the early digital data committee helping to bring SGML into the industry landscape and, also sitting on a number of ELS committees, as EFB was known then, as early as 1988. He sat on the Link 2000, PETAL II committee and as a consequence of that work, became a member with Boeing on the initial FANS/ATN committee.

Mike was a member of the Flight Technical team at Qantas and held other supervisory flight roles over his almost 34 years with the airline.

Mike has a Masters in Aviation Management, holds a diploma in Electronic Engineering and is a PRINCE2 Practitioner certified with the Office of Government Commerce in the UK.

Between Mike and Marcus, it's going to be an interesting chat. Let's get at it then, Marcus.

Gooday everybody, whatever time zone you may be in.

To start formulating a strategic approach for a post-COVID industry, we need to first look at the general strategic directions that airlines were taking pre-COVID. Razor-thin margins averaging 3% and increasingly tenuous hold on market share made for a fundamentally unsustainable business model. Continuing to run those two factors ultimately results in airlines that are unprofitable and too risky to operate. According to IATA's own economics, almost 70% of airlines were already in survival mode going into COVID. It's critically important to recognize this. If we don't, the strategy of airlines post-COVID will be to transition from the current catastrophe back into survival mode.

The K-T event about 65 million years ago was a catalyst for significant evolutionary change, leading to the dominance of mammals that persists today. In the face of wildly varying predictions about when the industry will regain its 2019 highs and continue the trajectory it was on, our challenge today is to recognize that...

COVID-19 is an evolutionary event for the aviation industry.

We're provided with a once in a lifetime opportunity to recast the industry, using the benefit of decades of hindsight. Every airline on the planet is being forced to re-imagine itself at the same moment in time. It's never happened before, and it may never happen again. Most of us hope it'll never happen again, which makes it even more critical that we make use of this opportunity.

Over the course of the next few minutes, we're going to look at the three main areas where airline strategy isn't working. They are:

- **Airlines can't or don't cooperate with each other**
- **Airlines can't engage meaningfully with industry initiatives**
- **Airlines can't provide strategic direction to departmental projects**

The three are very much connected to each other, which ironically makes them easier to address.

So, let's start with inter-airline cooperation. The details of the strategic approach of airlines are hard to nail down and we only have an hour, so let's consider survival strategy in a simpler scenario. You and one other person are shipwrecked on a desert island with available but scarce resources. The first five days you spend waiting on the beach for a rescue plane and when none arrive, you're forced to consider your survival. Chances are, you're both going to independently arrive at the same three strategies, with the first and most obvious being:

- 1 **Work cooperatively with each other** – resources may be scarce but engaging in collective activity such as building a fish trap may make them more available. Most people would see this as the obvious approach.
- 2 **Eliminate the competition** – while that doesn't improve resource availability, it does increase your share. Doing so limits the potential for you to improve your overall situation, but who knows what goes through people's heads in those circumstances?
- 3 **Hope that they starve first and that you're still capable of accessing resources** – for those unwilling to work cooperatively and unable to eliminate the competition, this may be the only alternative, but it's by far the weakest strategy.

Nonetheless, the airline industry is best characterized by cutting expenses and margins, then hoping to outlast the competition. We keep hearing about how important it is for all industry partners to work cooperatively to ensure a smooth restart, but those are mostly just motherhood statements without much substance. COVID hasn't just been a massive disruption – it's been a shipwreck...

...and we're coming up on day 5. So what are we going to do? Surely not the same thing again! We're not just going to lie on the beach eyeing each other off again, are we?

Okay, so we know that airlines don't cooperate with each other strategically even though it would surely make sense to do so. The second failing is **inability to engage with industry initiatives**, so let's look at how airlines conduct themselves with the broader industry, not just their competitors.

There are many excellent and well-crafted industry initiatives that an airline could feed into its strategy, but it's not really that simple to do so. Strategic adoption of even the most sound industry initiative carries a risk to the airline. That risk is higher when the airline has no knowledge of how the initiative might be regarded by other airlines. **Information about the general strategic roadmap of an airline does not compromise its competitive advantage.** That's a very important point – information about the general strategic roadmap of an airline does not compromise its competitive advantage. A number of years ago I participated in an industry initiative here in Australia where major banks were compelled to set aside their misconceptions about competitive advantage. They did so and revolutionized the residential mortgage industry to the advantage of their customers as well as themselves. All of them. Everyone benefited.

The bottom line is that every airline that considers an industry initiative does so in an information vacuum, so strategic objectives are incomplete, adoption is tentative, and risk is higher than it should be, putting everybody on edge. They cross their fingers and hold their breath, because better mechanisms don't exist. There simply isn't enough industry context around the initiatives to properly inform the airline's strategy.

That leads us to the third failing of airline strategy – **the inability to provide direction to airline projects**. That's not surprising, as airlines aren't willing share opinions about the merits of industry initiatives. How could strategy emerging from that isolated perspective possibly result in anything of benefit to the project teams? An airline's strategic objective may be no more detailed than "we intend to have an operational EFB program across the fleet in the next 5-7 years". No details, no impact analysis on the rest of the organization, and no positioning of the program in the longer-term roadmap of the airline. Why? They don't have that information.

The confusion is amplified when someone on a project becomes aware of an industry initiative and takes their business unit off at a tangent, without the knowledge of the rest of the airline. Of course, that should never happen, but in the absence of comprehensive strategy provided by the airline, it's pretty much inevitable. That initiative then becomes part of the *de facto* strategy of the airline. Think about that for a moment. The airline's strategy is being formed by a departmental project adopting an unsanctioned industry initiative. I defy you to come up with a more backwards approach to strategy formulation than that.

So this is the current approach to strategy. The airline does its best but can only loosely draw from a pool of disconnected and unprioritized industry initiatives, resulting in a strategy that lacks clarity and fails to properly account for risk. Recognizing this, the departmental project can draw little of real use. What typically happens at

this point is that an application is purchased, and the features provided by the technology form a pseudo-strategy. Soon after, the cracks start appearing at the system level. Processes are particularly vulnerable to this, and often need to be adjusted. The end result is that the program delivers only part of what it needed to, and what it does deliver is likely out of step with other departmental projects. While the project may not contradict the corporate strategy, there's no way of evaluating whether it supports it either.

Slide 10 - Marcus

Let's step back a bit and apply another simplified approach by defining a strategy as a collection of systems producing planned outcomes. An outcome from the strategy on the desert island might involve always having two days of boiled water stored. Like virtually every system, this one relies on information, process and technology. The information involves knowing where a source of freshwater exists, the first process is to relocate water from the source to the campfire, the technology is to stoke the fire to ensure adequate heat for disinfection. Of course, another process is to place the water over the fire in an appropriate container, but most of this system might be broken down to finer granularity - you get the idea.

There's a misconception within the airline industry that technology is the same thing as a system, and this causes massive misalignment between programs and strategy. Airline people flock to conferences to check out technology that might be applied to their programs, virtually making up a shopping list. Their criteria includes "does it satisfy my project requirements", "has it worked for other airlines", "does it satisfy my user expectations", "is it the coolest and the latest", etcetera. What they're far less likely to be evaluating against is "what organizational strategic outcomes would this fulfill?" Is that their fault? Well, it depends.

If the corporate strategy provides details of what's required or expected and the project team pays them no heed, it's the fault of the project team, otherwise, it's the fault of the strategy. The strategy needs to clearly convey detailed immediate objectives, as well as longer-term ones. When discussing technology with suppliers, the project team should be equipped to ask questions along the lines of "in three years we'll want to incorporate data from initiative x into our system. Are you currently working toward support for initiative x? Can you explain your approach?" Without access to the knowledge that the airline at least provisionally intends to adopt initiative x, the project people can't ask those questions.

So it's the fault of the corporate strategy? No, not necessarily. The airline can't and shouldn't make decisions about initiative x in a vacuum. In three years, initiative x may have been overtaken by other developments and been long since relegated to the scrapheap. Without the context of where initiative x is going to fit into the bigger picture and how much industry momentum is behind it, it's too risky to identify as a strategic outcome. It's bad business to saddle a program worth tens or hundreds of millions of dollars with strategic outcomes that are never going to materialize.

Slide 11 - Marcus

The buck has to stop somewhere though and at the moment, it stops with the airline's strategy. Technology drives systems, which are shaped into substandard departmental programs. Disparate departmental programs contribute to a loose and reactive airline strategy that is isolated from the rest of the industry. The result is silos.

Slide 12 - Mike

Looking at Marcus' illustrations and amplifying the airline perspective, it looks a bit like this. Multiple bottom-up initiatives restrained by departmental barriers.

EFB was a project like this. I can remember spending too much of my downtime filing and trying to assimilate pages and pages of revisions, just **knowing** an EFB would make it easier. But was it better? Really? And how's that measured anyway?

Projects grow for the most part within departmental boundaries and often competitively so. This is another drag on efficiency, but the detail would have us here for the rest of the day. Information rarely passes between and resource and energy-sapping infighting over project ownership and benefit allocation can have far-reaching and costly effects.

By way of example, the highest yielding EFB project of all time had a net present value in nine figures but was trashed because the engineering department felt they should own it rather than flight ops. After all, the project involved things being bolted on the aeroplane. It took more than a decade before the airline's EFB was realized after years more investigation, conferences and false starts.

We'll get to net present value in a minute.

While the strategic connection discussed by Marcus could have positive effects on the picture here, the reason for digging into the airline side of the industry's turf and strategy malaise is this.

Slide 13 - Mike

Carl Sagan, the famous astronomer, said: "You have to know the past to understand the present." We think, as an industry, we need to know the past to change direction into the future. We call this zero basing. Starting with a clean sheet but basing the design on the knowledge of decades.

So unlike accountants, we think past performance is a basis for future direction.

So, like many other philosophists, we've summed up the last few slides into **our** law of four, two, and a half where the cost of the industry's efficiency effort becomes apparent.

A few years ago, SAKS Consulting and, more recently, BCG calculated the real cost of airline technology projects.

We've repackaged their data to drive home the point.

The data delivers a harsh assessment of the results of projects in the operational segment of the industry. What's not here is that airlines consider only about 8 per cent of their projects to be successful.

Don't be shocked. The airline industry is not on the top of the naughty list.

The airline industry has some of the brightest people in the world in its family. So, why are these statistics so stark?

We think it's because there is a fundamental problem with the way the industry goes about its projects, and it's got a lot to do with this.

While this is a more recent stat, I think everyone's getting the idea that we believe the industry's approach to strategy could do with a bit of attention.

The fragmented structure of airlines, which carries into the bodies that run the industry, also fragments industry strategy as Marcus illustrated. That's if **initiatives** are really a strategy.

Here are a few examples. How's your organization?

The Harvard Business Review is as hard on the strategic aspect as SAKS and BCG were about operational projects.

It turns out that we haven't been **doing** strategy for decades. What's passed for strategy is the catchy statements we're all used to hearing. Can you think of yours?

While the corporate comms department thinks they're doing a great job with jingles, the rest of the organization is left to figure out their own. They, in turn, come up with catchphrases that trip them up. The departmental strategy of more than a few Flight Ops departments around the world includes "Saving fuel at all costs." What's that mean? Especially the "all costs" bit. We could chat about that — and have with some airlines — for a several of hours.

The challenges of good strategy run deep, and the costs are high.

We'll come back to strategy, but we need to look at another specific COVID focus for airlines.

Slide 14 - Mike

This is nothing new. A CEO's focus on the balance sheet and related financial stuff is important at any time. But now it's more critical than ever.

When we go, cap in hand to finance the latest, greatest gadget for the airline, we — well, most of us — had to answer some tough questions. They'll have greater emphasis now.

This will be the focus for a while because we're not hearing CEOs talk about anything else lately and there's a good reason. For many on this webinar, it'll also mean the so-called straight-line cost-benefit analysis will be a thing of the past. The discounted cash flow will decide the fate of projects from here on.

Why's that important?

Slide 15 - Mike

We don't want to get into accounting principles, but it's essential to get an idea of what CEOs will be interested in. And this is what they talk about now. Often.

The industry's value has plummeted. A liquidity crisis caused by continuing spending on leases, debt, wages, and other fixed costs while the aircraft remain idle has evaporated cash to dangerous levels.

In the short term may see a focus on earnings reporting at the expense of value creation, weighing strategic decisions against the impact on reportable earnings instead of, perhaps, a counterintuitive consideration of the value of future cash flow generated by an intelligent strategy and deft implementation. The first is a short-term approach that might pay off but put longer-term survival in jeopardy. The second approach focusses on the long-term viability of the organization and re-growing corporate value. We'll have to help our bosses tread a delicate balance between the two.

The levers that would be pulled — the tools that would typically be applied are of little use when everyone is in the same boat. — or plane. We can't sell assets to raise liquidity because no one wants them.

Liquidity is a critical aspect of financing. It puts us in the position where those holding our financial support can start pulling strings — or walk away, taking the rug out from under us as they go. We'll find it harder to secure financing when we need it in the future.

There's still a couple of levers we can pull.

Arrangements with suppliers and creditors are an obvious start.

We suspect that airline CEOs and CFOs have already pulled this one, hard. Have a look at lease pricing for example. The industry is **not** benefiting from nearly the lowest fuel prices in decades because we're not flying so, there's not much benefit in that direction. Without passengers, to fly, fuel price doesn't matter much.

Airlines are already making arrangements with customers. There have been travel vouchers, but airlines are going further, offering low fares to drive demand. In areas of the globe where travel is possible, and in a few domestic networks, this is having some effect, but not as much as hoped. A glance at the OAG indicates the false start in a few places.

Too many Webinars to count over the pandemic have pointed out the abundance of caution on the demand side. Of course, there's pent up demand. People haven't seen each other form most of the year. But when the initial rush blows off, what then?

Well, here's a novel idea. Keep more of what we earn.

Slide 16 - Mike

Suffice to say, we're not talking about cost-cutting here.

We've got to develop and choose projects that add value to the company.

Speaking to CEOs and CFOs: What we're talking about here is significantly reducing the cost of operations by **investing** in cost efficiencies that will improve long term forecast income. Projects that will improve forward NPVs and mean there will be less chance of having to book all your impairment charges. As we said, in the current liquidity crisis, it might seem counterintuitive — but in the light of everything else, what's left?

Projects will impact organization structures as well as systems and processes, and the different technology enablers that go with it. It'll mean new business methods and competitive differentiation based on different things. Are you game?

First, though, we've got to understand how the way we've chased efficiency over the years has worked for us — or hasn't — and channel Carl Sagan again by looking back, to develop the future.

Based on the registrations, here's a likely favorite for a few of you.

The EFB was invented in the late 1980s. I'll bet not many know that. It was called something else, but I digress. The first EFB entered service with FedEx around 1994, What many won't know is that the FedEx EFB was connected. Sure, it was the first go, but it delivered on expectations in function and finance.

It's been a tortured path for the EFB since. And I'll also bet most of our audience disagrees with me on that. But let me elaborate.

In 2016, Markets and Markets published a report claiming that the global EFB market would be worth over 5 billion in 2020. Oops... Now, a June 2020 report from the Industry Research Company notes the global EFB market is only worth a shade over 2 billion. But, its **forecast** to be worth over 6 billion by 2026. I'll take money against that too.

There's an interesting point about these numbers. They're what it's worth to the supply side. What's it worth to airlines? No one is disputing its utility. We all love it. But Closed Loop finds it fascinating that not many airlines can — or will tell you what its real value — its present value — those forward value-adding cashflows that increase the value of the airline — are. Why is that?

What we do know is, depending on the project, the real value of EFB varies between 9 figures — yes over 100 million, to minus 8 figures and yes, that's over ten million — minus forty million in the case we're talking about. We know big airlines that started with EFB project values of a bit over 2 million but have since gone backwards by several times that amount. We know smaller airlines that delivered north of ten million in annual savings. What's yours? It's ok if you don't really know. Not many do, and we understand why.

We'll leave EFB with this teaser. How long was your EFB project from the time it was first mentioned until it was a part of normal operations? Does anyone want to have a crack at the industry average?

Then, there's fuel.

While no one wants to cast any doubt on the importance of fuel-saving programs let's be frank. Do we all agree the low hanging fruit is gone? We don't. But the alternate theory is hard to ignore. Check this out.

What's missing?

Let me say at the outset that we're not anti, fuel-saving. I mean look at these numbers courtesy of one of the fuel-saving companies. They're eye-watering. It was on their website, so I'm going to declare public domain, but I'm not going to say who's it was. We did update the example to reflect the current fuel price, but still, that figure in the bottom right is convincing.

Except they're not real. Anyone know which airline has four thousand flights a day? There's one that was about that before the virus broke the industry, but a thousand kilograms a flight? C'mon.

What this chart does is demonstrate the power of multiplication, not much else. What's missing is...

What work had to be done — what was the effort— that saved that kilogram of fuel per flight? What about the fifty and so on? How much did that change actually cost? Spreadsheet projections are great. Here are some facts.

Because of scarcity, these are the real figures for one airline on **one** of its routes. This is the average holding fuel **used** for arrivals into one destination. Sometimes it was more. There were four flights per day all copping it, and this wasn't the only port with excessive holding in the network. Oh, and that 8 tons had to be carried for about 12 hours.

The holding fuel blown out the tailpipe in a week was more than the airline saved in a year from all its other fuel-saving initiatives. This airline was is not unique, so one wonders; are we looking in the wrong direction?

Here's another program. This one scratched around declaring about one or two hundred kilograms saving on a 12-hour flight with a departure upload close to two hundred tons. Apart from being difficult to measure except on a spreadsheet, the administrative and communications input costs required to achieve the fifty buck saving was often hundreds.

But the fuel was saved, and that's the point, right? Remember saving fuel at all costs?

We'll come back to this.

What about our environmental impact? Fuel-saving programs demonstrate huge savings of CO₂. Let's take a practical example.

Saving 30 kilos per flight in an airline with a more realistic schedule of say, 200 flights per day, saves more than six million kilograms of CO₂ every year. A recent IATA report states the industry collectively generated 914 million tons of CO₂ in 2019.

Let's get a bit utilitarian. Such savings are a fraction of a per cent of the industry's emissions. Until the virus smashed into us, there was a long way to go to get to the targets the industry had set for itself with a substantial looming cost.

But there is a huge opportunity too.

A 2017 NASA study about the industry's quote, "dirty little secret", end quote, notes that the airline industry's generation of contrails has had more effect on global warming than quote "all the CO₂ that aircraft have emitted since the Wright brothers flew in 1903". Tackling contrails was discussed at Heathrow's Big Green Day in 2010, and we've been able to fix that since then but we — the industry hasn't. Begs the question, what are we **really** trying to achieve?

How efficient are our efficiency programs?

Trajectory Based Operations — TBO for short — is the new kid on the block. It's been advanced by ICAO and picked up by most ANSPs to deal with the growing system disruption caused by capacity constraint across the board. It's a **bold** undertaking that effectively re-engineers the operational side of the industry. ANSPs almost have their ducks in a row, but the airline-side is dragging the chain. Remember what we just said about the holding fuel? Imagine if it was a thing of the past. That is TBO.

More later.

While the annual cost of global system delays pales into insignificance in the current environment, every commentator on the planet thinks everything will be back to where it was in a few years. What then? Well, we'll be lamenting the increasing cost of system delays — delays which we have an opportunity to correct, now.

Slide 17 - Mike

There's some breathing space before, to quote Marcus, heading back into survival mode.

Three per cent margins in a good year aren't sustainable — as if they ever were. It's even starker. IATA reported December last that the **relatively** good performance of the industry last year was delivered by only 30 airlines globally — with everyone else struggling.

While we know everyone is hoping it will all come back as fast as it stopped, it won't. Like the hard lockdowns we've all experienced around the world, we think a hard reset, a recast and recalibration if you like — albeit an engineered one — is what the industry needs.

John said earlier the same old ways won't work as we climb out of this thing. Without effort, it's likely the industry will come out of this year being a mirror image of what it was — a bit smaller — but with the same problems. Would that be smart? Having knowledge of decades as the basis on which we recast the industry — imagine what we could achieve.

It will come back, and we need to be ready for it, and we've got a vaccine driven window to get it done. Once the vaccine is on the street, it'll be too late to engineer change. The urgency will be gone, and we'll all be run over in the rush to get back to what was.

So, what might it look like? To get there, we need to accept where things are now — the frame of reference we've been discussing so far.

Slide 18 - Mike

It's not a spelling mistake.

We hear a lot about digitization and, why it's the latest panacea for everything. EFB was like that.

But have we gone off at a tangent here again? We all get excited about great new buzzwords that come and go before we've got a handle on what they mean to all of us. Who remembers 'eEnablement?'

Slide 19 - Mike (5:31)

Let's get straight into it and deal with digitalization quickly.

Quite a few of the webinars over the COVID period tell us how our aging system backbones don't lend themselves to digitization and that wholesale upgrade and replacement will be required to move the industry to a digital world.

What poppycock!

Digitization is a step in the digital transformation process for sure, but the industry has been evolving in that direction for years. Digitization, in the broadest possible sense, is not much more than getting page-based information into a digital form. Scanning paper and saving it as a PDF qualifies. Really - it does! Our old mainframe backbones are full of data and are much better than PDFs at processing it — and making it available.

Just because we've got petabytes of digital data does not confer digital transformation, but we've got a good foundation.

No, wholesale upgrade and replacement of new systems aren't needed. Capability and technology already exist to plugin and get moving and relatively inexpensively if we get the strategy and execution right. Digitization, actually, digitalization can be done quickly and inexpensively.

Another thing we hear a lot is that Big Data has to come before digitization.

Actually, no.

Data is already big. More data doesn't matter to a digitalized system. Knowing what we want to do with it ahead of time does. What we're not doing well is integrating the big amounts of data we have into systems and processes that leverage it well.

Does anyone know how many Big Data projects have been considered successful so far? It's not a pleasing number considering how much the industry has invested in it.

We like this one. It gets us into deep conversations with IT traditionalists, many of whom suggest everything must be carefully planned for - and then insist we all go agile.

Seriously though, the suggestion that for digitalization — leveraging digital — to work, everything must be expressed properly and exist in structured data systems like the databases of old is no longer true. The ability to work with and extract high value from unstructured, and unrelated data is common.

Data or information and the relationships between them are powerful tools and the future will be built on them.

Digitalization and digitization aren't the same. One is a step to the other. The value is in the former. Both terms are components of a digital transformation program. We're really talking about data and what we can do with it.

Let's not start conflating these, or suggesting it's difficult and expensive. The capability has been around for so long we're surprised the industry is not more advanced with digital transformation. The impact can be profound on the airline industry. Digital transformation programs can be modular, inexpensive and powerful.

When Closed Loop is asked to evaluate or frame digital transformation programs, we spend time with our clients helping them understand the why test. Being able to explain why tends to uncover the nuances that lead to successful outcomes, or in some cases, sends them back to the drawing board.

We did a session with an LCC a while ago. Executives flew in from overseas and domestic ports, a couple of IT specialists were there and a data analyst with Doctor in his title. It was a top-heavy meeting. But no users. They explained everyone was using individual spreadsheets to collect data and generate reports that were stuck within the carpeted office dividers. No one knew who had what, and just how much duplication was occurring.

No one could know the data's potential value or the intelligence it could provide. You'd have to say, this was a pretty reasonable problem statement.

They explained that their project's purpose was to justify the purchase of Tableau — data visualization software. A great solution, but to a different problem and another example of spinning the wheels of efficiency programs without getting anywhere.

Digital transformation is anything but the latest software craze.

According to a recent BT survey, seventy-five per cent of CEOs have digital strategies. But if the rest of the organization doesn't know and understand how these connect, failures occur. An executive idea is one thing, but operationalizing it is another. If the great initiative is not extended to business operations and systems, the outcome is likely to fit the stats McKinsey describes in their 2018 whitepaper noting failures of more than 80 per cent.

From what we've been saying, I think this statement would be expected. Before you start, know why you're doing it. Structure your program from the top-down and bottom-up. And get going.

Slide 20 - Marcus

Digitalization will provide you with access to a lot of value. It'll provide you with actionable intelligence. The implication being, someone will need to — act.

These are called "Sanke" diagrams, and these are based on unstructured data. The pictures they provide are indicative, but you can see the power of the relationships. The potential is endless.

You'll have this data already. Just get digging.

Slide 21 - Mike & Marcus

We've talked a lot about strategy, how it seems to be misconstrued by the industry, and the problems we have with projects. Marcus illustrated the silos at the industry level, and I spoke of how that manifests in airlines and the raw cost of it.

There's a lot of comment about how the industry climbs out of the COVID crisis. Governments and regulators have released ideas about what needs to be considered but so far, Marcus' comment seems to fit them best. They're all good... initiatives. What's missing? Apart from the detail.

If we really want to make a lasting difference, we've got to make some changes. The thing is, none of them is hard — just different.

There's no room here to capture everything that's floating about the industry. What we are trying to illustrate is important, yet, essentially disconnected initiatives being advanced by lots of committees that, except for a couple, are developing concepts in apparent disregard of others. Worse, some are running interference.

We think, instead of waves of three and four-letter acronyms, and snappy catchphrases, we need a strategic plan for the industry. And one from which the airlines may draw into the development of their own.

There are a couple of things about a strategic plan though. Most importantly, "plan" infers execution and outcomes. Then, it has to be operationalized throughout the industry.

We design all our client projects around these basic fundamentals, connecting departmental initiatives to the airline's strategy and helping airlines develop strategic plans that provide context to the rest of the organization. This simple approach overcomes the silos and the departmentalized and resulting compartmentalized thinking we illustrated earlier.

We think the simple answer then is to re-engineer the industry.

Slide 22 - Mike & Marcus

Our system discussion earlier was key in what we think a re-engineered industry might look like. Each layer responsible for aligning and bounding its initiatives but supporting the next layer in a recast industry ecosystem.

There are a lot of initiatives here and a few are key to a future vision of the industry, but some are mostly unheard of. We pop quizzed an industry conference last year and in a room of over 350 people, only one person had heard of FF-ICE.

AIXM, FIXM and WXXM should be in wider use. These are well-built and validated data exchange standards and they fit perfectly in the digitalization model we spoke of before, potentially saving airlines considerable effort and expense and providing immediate leverage over specific aviation operationally related data.

SWIM is an industry-Wide data-sharing initiative. Why not just subscribe to it and save years of hassle and expense. While the potential of SWIM develops with the user base, the concept of System-Wide Information Management has more prominence in a post-COVID world

TBO is another. Remember the holding fuel example? Fully implemented, TBO will eliminate a significant portion. While saving fuel will always be an important endeavor, some fuel-saving programs are approaching the law of diminishing returns. Holding fuel and other system delays are low hanging fruit and an easy target and making an immediate and large difference to fuel-saving outcomes.

Implementing TBO will test airlines, making the connection between the industry, the airline and departmental strategic plans more crucial.

Something like this.

The industry strategic plan, encapsulating and supporting the airline strategic plan.

And the airline's departments take their direction from there. Easy to draw. How easy to do?

IATA's stated mission is to represent, lead and serve the airline industry. Our take in the midst of COVID rearranges it a bit putting lead first. IATA is best placed to develop and provide the impetus for a global airline strategic plan. Its place within the structure of the industry puts it in the sweet spot between the industry regulator, ICAO and the airlines.

But IATA will need to evolve and shift some of its focus. IATA leadership will need to decide whether it sees IATA in a tighter industry leadership role, or leave the industry to struggle on as it was before the COVID crisis.

Like we said, strategic plan and all the bits, easy. The decision to radically change direction. Not so.

Slide 23 - Mike & Marcus

In the end, our vision is something like this.

An industry re-engineered with airlines being served by a developing thread of enabling systems, each relevant and complementary to the other. Airline departments have clearer objectives in terms of their own systemic requirements. Smartly designed ecosystems evolve throughout the airline and the industry and where appropriate into other airlines — like SWIM data — providing a digitalized currency for efficiency, saving and significant cost avoidance. Giving back just a bit more to the margins.

Airlines would find different ways to build competitive tensions and advantages. Because of the ubiquitous digital environment, many will evolve from different applications of information to the customer journey ecosystem.

Slide 24

And with the additional layers of hurdles in front of our customer's journeys, as we come out of this thing, every aspect of the journey will be up for grabs. The journey will be the new competitive differentiator.

Slide 25

Coming out of this thing better than when we went in, won't just be because we're smaller. It has to be based on something different.

Financially, the industry has complained about its ability to make money, predictably, for decades. It's conceived of many programs to try to build more and more layers of efficiency but most have taken years to realize little.

We think a true system and digital transformation throughout the industry is the panacea for the future. Perhaps it is visionary, but without a vision, where are we going?

Slide 26

Old worldviews need to change. Quickly.

I remember one of my bosses often reminding us all that it was quote "their train set" end quote referring to the company when he was making a point about how the aeroplanes would be operated and how we'd behave as employees.

He was a great guy, but I wonder if he was consciously or otherwise conjuring up the initial railways model of the fledgeling aviation industry? It has no place today.

Slide 27

I think we need to look higher. And model ourselves on the future, not the past.

Slide 28-35

And we can rebuild the industry with the journey. Instead of layers, we can build integrated journeys from the point of the initial search to the airport, through airports that become part of the journey experience and into the modern flight.

Facilitation draws on the same free-flowing integrated data, smoothing the journey at all points and even beyond.

This delivers a dynamic interactive, and proactive future that optimizes the opportunities we have in the recovery based on integrated, digitalized ecosystems with integrated data as its currency.

Whatever we do to enhance, and assure the journey, demand will flow sooner and the sooner we're back on the trajectory we were on before this event, the better.

Slide 36

We'll leave the last slide to speak for itself.