

When Air France-KLM starts testing AI



Letter from François Robardet

At the forefront of more responsible European aviation, we bring people together to build the world of tomorrow.

(Raison d'être of the Air France-KLM group)

Representing current and former employees

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N°967, June 3, 2024

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Editorial

Dear readers,

I would like to remind you that the Annual General Meeting of Air France-KLM will be held on Wednesday June 5, 2024 at 2:30 pm at the Hilton Hotel in Roissy. It will be webcast

live on the Group's website.

All documents relating to the Annual General Meeting are available on the Air France-KLM Group website, on the Shareholders page, under Annual General Meeting. In particular, you will find the resolutions that will be put to the vote of shareholders.

Thank you for your trust and loyalty.

Happy reading François

Monday's Press Review

> "Fox", "Pamelia" or "Charlie": when Air France starts testing AI

(source Les Echos) May 29, 2024 - Generative artificial intelligence won't be at the controls of airplanes anytime soon, but it's already circling. **At Air France, more than 80 projects using this new form of artificial intelligence**, popularized by the success of the ChatGPT application, **have already been launched**, some of which will soon be deployed in airports.

As early as **this summer**, **you** may **come across Air France staff** at Roissy-CDG **who can answer all your questions, thanks to tablets connected to a generative AI called Pamelia**. This is an adapted version of ChatGPT with an interface that allows it to tap into Air France's huge databases, with the ability to respond in 85 languages. "Pamelia", "Charlie" and "Fox" to be tested this summer

If your plane has a technical problem, you may see a maintenance technician arrive with a tablet connected to **another solution called "Charlie".** It **should enable** him to **identify the references of a faulty part in a flash**, rather than having to search through a stack of paper manuals.

And if the reception at the airport or the broken-down plane don't meet your expectations, **you can also send a message to customer service, which will be analyzed by "Fox", another generative AI,** capable, we're told, of understanding all forms of verbatim in 31 languages. This includes humorous and ironic messages, such as "What luck, another chicken on my flight!

(...) The

irresistible rise of AI

Despite the public's reluctance, the race towards artificial intelligence is nonetheless irresistible for companies, in air transport as elsewhere. This trend is not new, even if the arrival of generative AI in 2023 opens up much broader prospects, thanks in particular to its ability to dialogue with users and learn from mistakes.

Since the early 2000s, Air France and its competitors have been using data processing software in a number of areas, including maintenance, customer relations and pricing.

These crude forms of artificial intelligence enable them, for example, to estimate the maximum price at which to sell a seat on a flight, based on historical demand. Or when to send an aircraft for overhaul or change a part, to avoid the risk of a breakdown or longer downtime.

And the results are there. According to

IATA statistics, predictive maintenance could save airlines up to \$3 billion a year in maintenance costs, while Bloomberg puts the average increase in revenue generated by price optimization at 10%.

My comment: Airlines are distinguished by the diversity of their businesses, the massive amount of data they possess, and their in-depth knowledge of their customers.

These assets enable multiple use cases, improved working methods and cost savings.

However, it is crucial to understand artificial intelligence differently depending on whether or not it is used in areas related to flight safety.

In my view, it is dangerous to let artificial intelligence decide on the real-time handling of an unprecedented flight incident.

The social implications must also be considered.

Other sectors within airlines, such as remote sales or revenue optimization, could also be affected by the integration of projects including Artificial Intelligence.

> Schiphol downsizing plan: Minister Harbers on a roll

((source De Telegraaf, translated with Deepl) May 28, 2024 - Unions are coming down hard on outgoing Minister Harbers (Infrastructure), who presented a **new downsizing plan for Schiphol** on Friday. (..

.) Unions are warning that outgoing Minister Harbers ' new downsizing plan lacks a democratic mandate.

So says an article in De Telegraaf. According to De Unie union leader Reinier Castelein, **the latest proposals, which include reducing the number of night flights and introducing a siesta on the Aalsmeer and Zwanenburg runways**, lack a democratic mandate.

(...)

The unions are surprised by the outgoing minister from the VVD, a party that prides itself on its commitment to entrepreneurs. "People forget that costs are more important than benefits. Money for nuisance abatement and sustainability has to be earned first. We don't understand why the VVD lets this minister walk around like an elephant in a china store. We hope that the VVD will come to its senses and realize that a stable policy is needed for an enterprising Netherlands," said Piet Visser, head of the Dutch aviation technicians' union.

The FNV says it can't comment, while the Dutch cabin crew union believes the minister should look at the industry's plan, which avoids carving up, but achieves noise targets if a little more time is taken. "In the short term, a Boeing 747 ban is not an option. Our plan is feasible and achievable," says Chris van Iswijk. Research institutes such as TNO, the Dutch Aerospace Center and TU Delft are also backing the project.

Sources tell De Telegraaf that the **Ministry of Infrastructure is spending millions on all kinds of external consultants who have prepared these plans**. "Harbers wants legal certainty for local residents. He can still approve the airport traffic decision, which is already ready. Legal certainty will then be in place while he works on the reduction," said an insider. New elements

The first reduction plan is still in Brussels, but while this procedure continues, the Minister is adding new elements. Last year, no advice was sought on these elements, such as raising the price of noisy aircraft and eliminating night flights. For example, the Minister is still studying the impact of reducing night flights, but Brussels will have to decide on this point at a later date.

Resistance

"Why are we proposing something today that we may have to withdraw later?" says Maarten van As, head of the ACN freight carriers'

union. "There is resistance. Our alternative sector plan is being sidelined. What's more, the abolition of night flights will once again bring pressure from the US and Canada."

My comment: The four coalition parties, which will win the Dutch elections in November 2023, have agreed that Mr. Dick Schoof will head the new government, whose composition and precise program should be known by June 26.

It is surprising that an outgoing minister (Mr. Harbers)

should present a new plan to reduce flights at Schiphol before the new government is formed and the minister responsible for air transport (among other things) appointed.

> Corsair asked by competitors to be more transparent about its accounts

((source Le Monde) May 30, 2024 - The skies are closing in between Air Caraïbes and Corsair. According to our information, on May 22, the former took its rival to the mixed commercial court in Pointe-à-Pitre (Guadeloupe) for summary proceedings. Christine Ourmières-Widener, the new CEO of Air Caraïbes and French Bee, the two airlines in the Dubreuil group, is seeking "the publication of Corsair's accounts, which have never been published". The hearing is scheduled for June 14. Interviewed by Le Monde, **Pascal de Izaguirre, CEO of Corsair, says that "he has not yet published the 2022 accounts**" of his company. "But we will," he assures us.

It was the financial terms of Corsair's restructuring plan, presented at the end of 2023, that set off the powder keg. Prepared by the French government, the plan calls for more than €147 million in tax and social security debts to be waived. Subject to approval by Brussels, **the plan was criticized by the European Commission**, which launched an in-depth investigation.

In particular, the Commission has "doubts as to the restoration of Corsair's long-term viability". Worse still, the Commission points to the absence of "sufficient measures to limit distortions of competition" with rival airlines Air Caraïbes, French Bee, Air Austral and even Air France.

At the end of April, before deciding whether or not to give the green light to the operation, Brussels contacted other "stakeholders", such as Air Caraïbes and Air

Austral. These companies had thirty days to comment on the restructuring plan for Corsair, prepared by the French State, and send their responses to the Directorate-General for Competition in Brussels. Air Caraïbes and French Bee replied on Friday May 24.

Ms Ourmières-Widener says she is acting out of "a concern for fairness. I like a fair fight, and today that's not the case". **Unlike Corsair, Air Caraïbes and French Bee did not benefit from a restructuring plan**, "otherwise we would have had to go before the European Commission, which was not the case", points out the CEO. Denounced

failings

(...)

In her reply to Brussels, the CEO expresses surprise at her rival's failings. **The obligation to report every six months on the evolution of the plan had not been respected by Corsair**. What's more, Air Caraïbes and French Bee have discovered that "the French State paid Corsair 32 million euros in addition to the 2020 restructuring plan, without seeking authorization from the European Commission". Finally, Ms. Ourmières-Widener points out that "the **obligation not to launch new destinations" was not respected by Corsair either**, as pointed out by the Commission.

My comment: In letter N°911 of May 8, 2023 dealing with this issue, I wrote the following comment:

"For Corsair, the worst off of the three airlines [Air Austral, Corsair and Air Caraïbes], a solution is urgently needed. The postponement of the publication of its 2022 accounts sends out an alarming signal."

One year later, the 2022 accounts (and the 2023 accounts) have still not been published.

> Cabin baggage charges, choice of seat... Ryanair, Volotea, Vueling and easyJet face huge fines in Spain

((source Bfmtv) May 31, 2024 - Spain's Consumer Affairs Minister has imposed **a historic 150 million euro fine** on **Ryanair, Volotea, Vueling and EasyJet** for abusive practices. According to El Pais, the four low-cost airlines were **accused of abusive and unfair practices**. These include **charging passengers for cabin baggage.** Or charging for side-by-side seats for passengers with children or **people requiring special assistance**. The companies have also been penalized for a lack of transparency in their contractual information and for prohibiting payment in cash, according to radio station Cadena SER.

This is the biggest fine ever imposed for unfair practices, according to consumer authorities.

Although the exact content of the penalties has not been disclosed, the airline with

the biggest fine is said to be Ryanair, which began charging for hand luggage back in November 2018. This decision follows complaints from consumer organizations. But the airlines can still appeal the decision and intend to defend the possibility of taxing cabin baggage.

My comment: In September 2023, the European Parliament's Petitions Committee (PETI) passed a resolution calling for the harmonization of measurements and weights of suitcases and hand luggage, so that all airlines operating in the EU use the same standards.

At the time, an MEP stated that:

"Low-cost airlines are doing business with the price of tickets by hiding the cabin baggage surcharge until the end of the purchase. Europe has already spoken out on the subject, but member states continue to allow airlines to play with prices and cheat travelers. This has to stop.

The stakes are high. As APNA points out in its latest newsletter:

-- beginning of quote

The face price of tickets for a company such as Ryanair, would represent only 20% of its revenues. Abusive or otherwise, surcharges can double its sales to passengers. Direct or indirect regional subsidies through the under-invoicing of airport services, and the group purchase of aircraft and resale per unit, with subsidies from the American Eximbank, do the rest. Without an effective European regulator, the ethical competitors of these Ultra Low-cost carriers are tempted to copy these practices in order to survive in the ultra-competitive world of European aviation.

Spain's decision, in favor of consumers, is a first. It remains to be hoped that other European Union countries will follow suit.

> Opening of Mauritian skies: the shadow of Ethiopian Airlines looms over Air Mauritius

(source Defimedia) May 29, 2024 - Discussions with Ethiopian Airlines were mooted in May 2020, but came to nothing: Air Mauritius was not to be jeopardized. In local aviation circles, the name of **Ethiopian Airlines is** resurfacing. This African aviation leader **would like to exploit the Mauritian market by offering a multitude of destinations in Africa through its Addis Ababa hub**. It also intends to offer competitive fares to European destinations. Something that Air Mauritius is not in a position to do. And for the **time being, Air Mauritius' veto still stands**. (...) At government level, Ethiopian Airlines' demands are not falling on deaf ears. However, at the highest level, they continue to object, so as not to jeopardize Air Mauritius. Within the Labour Party and the Mouvement Militant Mauricien, Ethiopian Airlines also has its fans. They believe that Air Mauritius will retain the privilege of direct flights to its main destinations, such as Paris and London, and will keep a firm grip on La Réunion.

(...)

A long-standing interest

Founded in 1945, this airline, which is 100% controlled by the Ethiopian state, has been interested in Mauritius for a number of years. Already in 2019, a request for authorization to use Plaisance airport had been made. But it was rejected. **Ethiopian Airlines is seeking the fifth and sixth freedom of the air in Mauritius. This right allows an airline from one country to link two other countries by making a stopover in its own country**. This means that the carrier could board passengers in Paris bound for Mauritius via its hub in Addis Ababa, and vice versa.

This is similar to what Emirates has been doing in Mauritius since 2002, using Dubai airport as its hub. Turkish Airlines has also enjoyed this privilege since December 15, 2015.

Ethiopian Airlines, already owner of ASKY Airlines, Malawi Airlines and Zambia Airlines, was even highly interested in becoming a strategic partner, and possibly shareholder, of Air Mauritius. (...

)

Pressure from the African Union to open up Mauritian skies

The pressure to bring Ethiopian Airlines on board isn't just coming from within. At the level of the African Union, pressure is being exerted through the Single African Air Transport Market (SAATM)

project. To date,

34 African countries, out of the 55 members of the African Union, have signed up to SAATM. Mauritius is not yet a member, nor are the Seychelles and Madagascar. This project aims to facilitate air travel in Africa by creating a single market for African airlines. This will allow greater freedom of movement for flights between African countries.

A sine qua non condition is the removal or easing of restrictions on flights between African countries. This

would mean that airlines from SAATM

signatory countries could land at Plaisance with unlimited frequency and number of passengers. They could also use their hub to take passengers from Mauritius to other destinations and vice versa. Air Mauritius will also be able to land at airports in signatory countries without having to obtain special authorizations.

The aim of this project, launched in 2018 by the African Union as part of its Agenda 2063, is to reduce the cost of tickets. It also aims to stimulate economic development in the signatory countries. **However, the project will mainly benefit the biggest and strongest airlines in the region, including Ethiopian Airlines. Ethiopian**

Airlines can boast of being the flagship of African aviation. It has been voted best African airline by Skytrax for the past six years.

However, Air Mauritius believes that if Mauritius joins this project, it will sign the airline's death warrant. And Mauritius needs a national airline to guarantee its independence and to fully exercise its sovereignty.

My comment: Ethiopian Airlines is now a major player on the African market.

It wants to reinforce its hegemony on the African continent by signing an agreement with the Mauritian government, like Emirates, thus accentuating the weakening of Air Mauritius.

Mauritius has clearly understood the benefits of such a partnership for tourism and its economy, but does not want to see its national carrier put in a position of weakness.

But for how much longer in the face of growing pressure?

As a reminder :

Ethiopian Airlines owes its success partly to the unfailing support of the Ethiopian government, and partly to the presence at its head of CEOs who are specialists in the airline business.

Ethiopian Airlines also receives indirect support from China and India. China and India have made Ethiopia their Trojan horse: to circumvent U.S. embargoes, they route their goods through Addis Ababa.

> Aura Aero joins forces with Airbus to certify its future electric regional jet

(source Les Échos) May 28, 2024 - Aura Aero continues to build up its network of partners to help it pass the certification hurdle for ERA, its 19-seat hybrid regional transport aircraft, which is not expected to enter service until 2028, but has already received over 500 pre-orders.

The Toulouse-based aircraft manufacturer reveals that it has signed a cooperation agreement with Airbus Protect, a subsidiary of the European giant specializing in risk management. "Working with Aura Aero demonstrates Airbus Protect's ability to help companies in the aeronautical industry manage risk at all levels, not only in terms of safety and cybersecurity challenges, but also in terms of sustainability and contributing to the decarbonization of regional aviation", says Thierry Racaud, CEO of Airbus Protect. It is also an opportunity for Airbus Protect to extend its expertise in new technologies such as hybrid propulsion and all-electric systems, as well as in the regulatory framework for general aviation (CS-23).

At the last Paris Air Show, Aura Aero had already unveiled a partnership with another Airbus subsidiary, Airbus Flight Academy Europe (AFAE), for the

introduction of electric-powered aircraft in commercial and military pilot training. Supplier selection and cooperation with EASA

Last month, at the Friedrichshafen Air Show in Germany, the SME announced that it had reached two key milestones in the certification process. The company has launched the first major calls for tender to select suppliers for manufacturing the aircraft. Secondly, with a

view to obtaining certification from the European and American authorities for its ERA aircraft, scheduled to enter service before 2030, Aura Aero has signed a contract with EASA, becoming "the first company to cooperate with the European Aviation Safety Agency in the field of regional electric aircraft".

At the same time, the Toulouse-based manufacturer is due to launch the test campaign for Integral E, its two-seater electric aircraft, with a view to obtaining certification.

In addition to developing its aircraft, the Toulouse-based manufacturer intends to raise a massive amount of capital in 2024. Aura Aero has already raised 62 million euros since its creation (including 35 million in 2023 alone), and is planning a new round of financing of 150 million euros this year. For the young company, 2024 will also mark the filing of the building permit for its future 40,000 m2 electric aircraft factory, also at Toulouse-Francazal airport. This €150 million project is currently being finalized, and is expected to involve both local authorities and private players. The plant is due to come on stream in 2027, and will eventually employ 1,500 people.

My comment: Electric propulsion has already proved its worth in aviation with the two-seater Pipistrel Velis Electro. This technology now seems mature enough to tackle the regional aviation market, and compete with conventionally-powered aircraft such as the 19-seat Beechcraft 1900.

The partnership between Airbus and Aura appears advantageous both economically and technologically.

If this project comes to fruition, it could pave the way for the design of a similar aircraft model for business aviation.

> How business aviation hopes to pioneer the decarbonization of air travel

(source Les Echos) May 29, 2024 - Will the most polluting mode of transport, the business jet, be the first to achieve the Holy Grail of carbon neutrality? That's the ambition of the industry's leading players, gathered for two days in Geneva at the Ebace trade show.

Faced with the hostility of some sections of public opinion, industry leaders have realized that it is no longer enough to invoke the essentially professional utility of business jets to escape surcharges and bans. Hence the **goal of making business aviation a pioneer in the decarbonization of air transport**.

A detailed action plan

An ambition reaffirmed this year through new commitments. The European Business Aviation Association, EBAA, has detailed its action plan, designed to help companies move towards carbon neutrality.

This four-year **program is** not limited to reducing CO2 emissions and combating climate change, but also **includes a number of initiatives aimed at strengthening the social acceptability of private aviation**, such as solidarity flights for medical or humanitarian reasons, or an inclusive recruitment policy.

It will enable companies to obtain a label, likely to enhance the value of their efforts in the eyes of their customers, who are considered to be less sensitive to price and additional costs than those of air transport.

However, the most ambitious objective concerns sustainable aviation fuels (S.A.F.), for which EBAA and the American association GAMA advocate rates well above those for "mainstream" air transport.

While European regulations call for 2% SAG in aircraft kerosene from 2025, 6% in 2030, 20% in 2035, 34% in 2040 and 70% in 2050, EBAA and GAMA recommend a minimum of 5% from next year, 20% in 2030, 40% in 2035, 60% in 2040, 80% in 2045 and 100% in 2050, on all types of routes.

Compared with airlines, the CAD needs of business aviation are much more modest, making the incorporation targets less difficult to achieve. According to the EBAA, which calculated the CAD requirements of all major

European business airports, the leading airport, Le Bourget, would already have enough to serve all its customers with 5% CAD kerosene, i.e. 1,933 tonnes. The quantity needed to reach 100% would not exceed 40,000 tonnes, compared with 28 million tonnes for European air transport at the same date.

Carbon neutrality as early as 2045?

Added to the **20% to 25% reduction in fuel consumption promised by the new 100% CAD-compatible business jets** due to enter service between 2025 and 2028, this forced integration of sustainable aviation fuels would, in theory, enable European and American business aviation to achieve carbon neutrality as early as 2045. And that's not counting future hybrid, half-electric, half-thermal aircraft, such as Voltaero's Cassio 330 or the Lilium Jet, which are already appearing at trade shows and making a growing number of announcements, with a view to their forthcoming entry into the air cab market around 2026.

(...)

Regulatory handicaps

However, business aviation also has its handicaps in the race to decarbonize.

Starting with the fact that it serves three times as many airports as airlines, including a large number of small airfields that are difficult to supply with CAD.

Business aviation is trying to correct its image as a luxury polluter.

To remedy this, its representatives are lobbying for the addition to European regulations of a "book & claim" system, enabling the purchase of a given quantity of CAD on the market, which will be injected into the general supply circuit of European airports, but which will not necessarily be found at each refuelling. This is a demand that airlines are also making.

Business aviation would like to see its decarbonization efforts better recognized by regulators. But this is far from being the case.

Unlike air transport, business aviation remains excluded from activities likely to benefit from "green" financing. What's more, several candidates for the European Parliament from the ecologist movement are still making a ban on business aviation one of their hobbyhorses, particularly in France, home to Dassault Aviation and the industrial fabric linked to this activity.

My comment: The race to decarbonize is on.

Business aviation has declared itself capable of incorporating 100% SAF by 2050, while the major airlines only plan to incorporate 70% by 2050.

If these forecasts come true, the major airlines will have to use their imagination to justify themselves in the eyes of their detractors.

End of press review

> Air France-KLM share price trend

Air France-KLM shares closed at 10.475 euros on Friday May 31. It is up this week by +0.87%.

Like other companies in the airline sector, Air France KLM has had to cope with flight disruptions due to Iran's attacks on Israel.

It was 12.53 euros on January 2, 2023, and 17.77 euros on June 19, 2023.

The average (consensus) 12-month analyst price for AF-KLM shares is 15.09 euros (it was 15.0 euros at the beginning of January 2023). The highest price target is 23.00 euros, the lowest 9 euros. I only take into account analysts' opinions subsequent to the May 2022 capital increase.

You can find details of the analyst consensus

on my blog.

My comment: After fluctuating between 9.50 and 10 euros following the announcement of the 2023 annual results, Air France-KLM's share price has regularly exceeded 10 euros for the past month.

First-quarter results have reassured investors somewhat.

> Fuel price trends this week

The price of a barrel of Jet Fuel in Europe is down \$2 to \$99. It was \$94 at the end of June 2023, and \$79 before the outbreak of war in Ukraine.

Brent crude oil (North Sea) is down -\$1 to \$81 per barrel.

From mid-February 2022 to the end of July 2022, it was yo-yoing between \$100 and \$120. Since then, it has oscillated between \$75 and \$99.

My comment: The spread between Jet Fuel in Europe and Brent crude oil was around \$15 before the conflict in Ukraine. In 2022, at the start of the Ukrainian conflict, this differential was close to \$50.

The Jet Fuel spread in Europe and Brent crude oil is down slightly this week, to \$18. It has been two months since the spread returned to a level of \$25 or less.

> FCPE management

When you invest in one of Air France's FCPE funds, you obtain shares in these funds. You do not hold shares directly.

It's the supervisory boards, which you elected in July 2021 for a five-year term, that manage the funds and make the decisions.

The Aeroactions, Majoractions and Concorde funds only hold Air France shares.

The Horizon Épargne Actions (HEA), Horizon Épargne Mixte (HEM) and Horizon Épargne Taux (HET) funds manage portfolios of various equities.

My comment: If you'd like to find out more about the management of the various Air France employee shareholding funds, please visit the <u>Air France-KLM employee</u> <u>shareholding section of my website</u>.

Details

This information does not constitute a solicitation to buy or sell Air France-KLM shares.

You can react to this press review or send me any information or thoughts that will help me to keep you better informed.

By return, you can ask me any questions you may have about the Air France-KLM group or employee share ownership...

See you soon.

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New readers can receive it by sending me an email address of their choice.

François Robardet

Represented Air France-KLM's employee and former employee PS and PNC shareholders. You can find me on my twitter account @FrRobardet

When I was elected, I received the support of the CFDT and the UNPNC. This press review deals with subjects linked to Air France-KLM shareholding. If you no longer wish to receive this press review, <u>[unsubscribe]</u> If you wish to change the address at which you receive this press review, please <u>send</u> me <u>your new email address</u>

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