

# **GREENING AVIATION**

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# EU's ambitions for green air traffic rules grounded



Europe's plan to consolidate a patchwork of national air traffic control systems to reduce flight delays and boost environmental performance appears grounded for now, hampered by national governments' inaction and fear of losing sovereignty. EurActiv reports from the Farnborough Airshow.

Aviation officials have voiced frustration at the slow progress in integrating national air traffic control zones into regional blocks – an objective that was initially meant to be completed by the end of 2012.

They are now accusing governments – including Germany and France – of failing to live up to their obligations under the EU's Single European Sky (SES) initiative.

### 'Getting nowhere' with governments

With Europe's aviation industry saddled with slow growth and high fuel costs, airlines have become more vocal, urging the European Commission and EU leaders to stick to their December 2012 deadline to create nine 'functional airspace blocks', or FABs, that were proposed with much fanfare in 2004.

"With the member states, we are getting nowhere," lamented Regula Dettling-Ott, Lufthansa's vice president for European Affairs. Speaking at a meeting of transatlantic airlines and regulators last month, she complained that "the biggest single  $\mathrm{CO}_2$  reduction project Europe has is not moving."

Her boss, Lufthansa chief executive Christoph Franz, told the Association of European Airlines in a 24 May speech that he was "furious that the largest EU member states are simply not delivering" on their commitments.

Ecology groups like Transport and Environment have endorsed efforts to end the partition of air traffic control along national lines, seeing it as a way to counter the growing rate of aviation emissions.

### Billions of euros at

There are more than environmental concerns at stake – the EU and airlines expect to invest upwards of €30 billion in modernising air traffic control.

The European Commission in turn has estimated that more seamless air travel could reap instant savings. Cutting flight delays by 30 seconds could save some €920 million between 2012 and 2014, EU figures show, while reducing airline carbon emissions by up to 12% annually.

Currently, aircraft must be vectored along indirect routes to avoid crossing virtual borders or can face delays in hand-offs from one national controller to another. The Single European Sky (SES) would in effect erase some of those boundaries, with controllers handling regional blocks without regard to national

The European Commission has long acknowledged problems with the pace of its Single Sky initiative, especially in consolidating traffic management. Last November, the Commission warned national governments that it was prepared to take "corrective measures" for failure to meet deadlines set under SES.

EU governments – along with Bosnia, Croatia, Norway and Switzerland – are to cooperate in regional groupings to create the nine FABs by 4 December. A programme to upgrade air traffic management, called SESAR, is being undertaken through Eurocontrol, an organisation that includes EU states and 12 other nations.

### Limited cooperation

While there is broad cooperation on upgrading technology, industry and environmental groups say they do not see a full switch to the FABs happening anytime soon. The best the EU can hope for in the near future, these sceptics say, is joint training and limited regional coordination on air traffic management, which is already

taking place between Britain and Ireland, and Denmark and Sweden.

Aviation industry officials have told EurActiv that the Commission is likely to propose a revamp of the Single European Sky as early as next year, in effect conceding that the FABs would remain on the table for the future development.

A Commission transport official, speaking on condition of anonymity, said the EU executive is considering two options: taking non-compliant states to court to force action, or reconsidering the more ambitious proposals on FABs

The official conceded that the Commission's "bottom-up approach" – letting national governments take the initiative – has hampered efforts towards "coordination, consolidation and integration" of air traffic management.

"We are far from these targets," he acknowledged.

### National sovereignty

Sovereignty issues as well as labour concerns are the main source of inaction, officials said, with trade unions representing controllers resisting possible consolidation. Language is much less of a hurdle since English is the default in global air traffic control.

But there are also national security concerns, with civilian aircraft in many countries already routed around military airbases in what aviation industry officials, keen on more direct routes, say is a relic of the Cold War.

"The degree of integration within the FABs is minimal," said David Henderson, an analyst at the Association of European Airlines, which represents 34 carriers.

"The Commission is faced with extremely recalcitrant member states and because the member states won't budge, there's very little that can be done."

Industry officials also say the EU has been distracted in progress on the Single European Sky by its global dispute over the aviation Emissions Trading System (ETS).

"On the one hand the airlines are being asked to pay for the emissions, and on the other hand the European governments are not doing enough to reduce the emissions through air traffic management improvements," said Paul Steele, executive director of the Air Transport Action Group, an international industry association that promotes sustainable aviation.

With national governments struggling to put out the wildfires of currency and financial crises, the air traffic control project isn't gaining traction.

"In the current environment, it's just not happening," Steele told EurActiv.

### SESAR and the future

Still, other components of the SES are moving ahead.

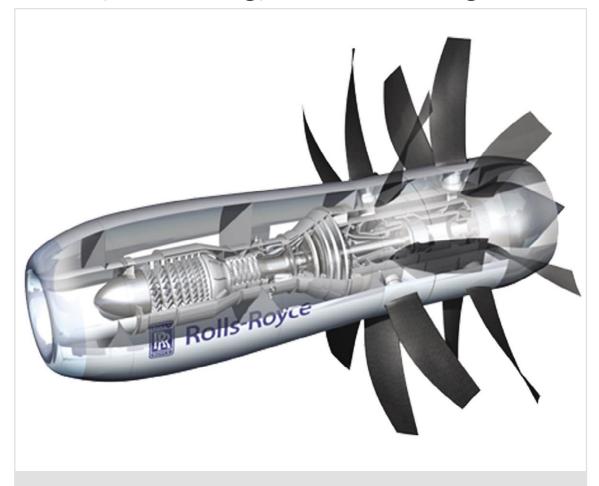
Development of new air traffic management systems to replace older-generation platforms – some dating to the post-war years – is moving as are negotiations between the United States and EU to create smoother transatlantic control.

Deployment of a new system is expected to begin in 2014, said Bo Redeborn, director of air traffic management for Eurocontrol, which is working to develop the SESAR air traffic management system.

But he acknowledged there are delays in the SES's twin projects – the technology upgrades and the consolidated air blocks.

"Political marketing is raising expectations that things will be improved, and the airlines are impatient — they want more things to happen now," he said in an interview. "But you can't change things overnight."

# No easy technology fixes to cutting aviation emissions



Rolls-Royce's concept of an open-rotor engine is part of Europe's Clear Sky project.

Revolutionary changes in aircraft engines, coupled with more streamlined aircraft designs, are making flying cleaner as the industry aims to slash carbon emissions by half in the decades ahead. EurActiv reports from the Farnborough International Airshow.

One promising development that is supported by a European Union research programme is the open rotor engine that can propel an aircraft with up to 35% more efficiency than the conventional jets used today.

But there's a huge drawback: the counter-rotating propellors, which look like a twin set of twisted fan blades, are noisy. Researchers who tested similar engines more than 30 years ago had to shelve plans for commercial development in part because of their earpiercing sound.

The open rotor technology is symbolic of the challenges faced by both policymakers and the airlines in trying to solve one environmental problem without creating another. The drive for the use of biofuels in aviation has, for instance, spurred concerns amongst

environmentalists that when the impact of production is included, plant fuels do little to reduce greenhouse gas emissions.

What is clear is the need to improve efficiency to reduce the costs of complying with EU emissions rules and to meet aviation industry commitments to cut carbon emissions to 50% of 2005 levels by mid-century.

"Operational efficiency is the Number One thing to improve profitability and competitiveness," Ray Conner, the new president of Boeing's commercial airplanes division, told journalists at the Farnborough International Airshow in Britain on Monday.

### Lighter and more streamlined

In trying to meet those goals, aircraft manufactures have turned to lighter and more durable metals like titanium, sleeker aircraft designs, slimmer seats and even low-energy lightbulbs to save fuel. But above all, engines have to do more with less.

Backed by the EU-aviation

industry Clean Sky partnership to promote greener flying, companies like Snecma, a division of France's Safran Group, and Britain's Rolls-Royce are testing open rotor engines to ensure that they are safe - and quiet.

They are part of the growing technology field aimed at improving efficiency and lowering aviation emissions as the industry grows in the decades ahead. Already, revolutions in engine technology, streamlined wing and fuselage design and lighter component parts have helped reduce fuel use by 30% since 1990, according to Sustainable Aviation, an industry organisation in Britain.

Environmental concerns alone are not driving changes many European and American airlines are struggling to squeeze out profits as passenger numbers level off in turbulent economic times, and cutting fuel cost is a quick way to bring down expenses. They are also concerned about long-term stability of fossil fuel supplies as global demand for passenger travel grows.

### A boom market

Both Europe's Airbus and Boeing, the leading American aircraft maker, project a surge in production in the next 40 years, driven by growing passenger numbers in emerging countries and the need for airlines in the traditionally dominant markets of Europe and the United States to replace older, less efficient airplanes.

Boeing's newly published Current Market Outlook projects that world airlines will need 34,000 new aircraft by 2031, up from 19,890 in service today and more than five times the number of passenger aircraft in service in 1977.

The US market research firm Forecast International, in a reported released at the Farnborough air show, estimates that 14,655 new large airliners will be needed over the next decade, with Airbus and Boeing battling for much of that market.

More economical aircraft are not the only way to lift profits while lower pollution. Europe's plans to consolidate national air traffic control systems would reduce flight delays and improve environmental performance - although the EU's signature programme to improve traffic management, the Single European Sky, appears to be well off target.

Aviation industry officials have told EurActiv that the European Commission is likely to propose a revamp of the Single European Sky as early as next year, in effect conceding that the earlier plans were too ambitious.

Meanwhile, passenger airlines continue to look to their suppliers for innovations to boost efficiency. Lighter but more durable metals like titanium used in engines, landing gear and fittings have helped reduce aircraft weight. Arch-rivals Airbus and Boeing say the newest versions of their traditional workhorse aircraft - the A320neo and Boeing 737 Max - will deliver double-digit improvements in efficiency.

### Engine for the future

But technologies like the open rotor are not likely to show up on aircraft anytime soon. Aircraft would have to be re-engineered and designed to accommodate their rearmounted propellers. Their use would also be limited to single-aisle aircraft rather than the larger, continent-hopping jets that emit more carbon gases.

And solving the noise problem could take time. Aside from the research taking place in Europe, the US space agency NASA, in a report released last year, concluded that despite efficiency advantages of open-rotor technology, noise presented a significant setback with current technology.

Safety issues also remain a concern. Ian Lane, who heads the stress methods and expertise for Airbus in Britain, says aircraft would have to be redesigned to handle the impact of flying fragments should an engine break apart in flight - a rare but not unprecedented occurrence.

Still, he says design changes in future models can be made to ensure safety and the efficiency of open rotors.

"Our customers need reliable aircraft that work today. We don't force technology on a customer. But, he said at an innovation exhibition at Farnborough, "every new airframe is an opportunity to incorporate new technologies."

# Aviation industry presses for biofuels support

Under pressure to cut carbon emissions, the aviation industry is urging policymakers to support the development of biofuels for aircraft in the same way they have done for road transport. EurActiv reports from the Farnborough Airshow.

Biofuels were cleared for aviation use in June 2011 so long as they are blended with traditional jet fuel, and their use remains a novelty due to limited supply and high cost.

Industry officials are urging governments to help lift supplies, much as policies in the EU and United States have created a flourishing market in plant-based oils for cars and lorries. The industry contends that sustainable fuels — when combined with aerodynamic design, efficient engines and improved air traffic handling — will reduce emissions even as passenger traffic grows.

Tony Tyler, director-general of the International Air Transport Association, says the oil derived from plants could reduce the industry's carbon footprint by up to 80% in the decades ahead.

"They have already powered more than 1,500 commercial flights," he told the trade group's recent annual meeting in Beijing. "But to increase utilisation, costs need to come down and the supply needs to increase. That will only happen with government policies to de-risk investment, including setting global standards."

The Air Transport Action Group, or ATAG, reports that biofuels are expected to account for less than 1% of the industry's fuel supplies this year, rising to 30% by 2030 and 50% a decade later. The Geneva-based industry organisation, which promotes environmental sustainability, has urged governments to support research, plant development and refining capacity to achieve those targets.

### Policies turned upside down

Others in the industry say government policies such as those in the European Union that support biofuels on the ground may be turned upside down.

Alan H. Epstein, vice president for technology and the environment at aircraft engine-maker Pratt & Whitney, says when it comes to curtailing emissions, it makes better sense to have more electric cars and lorries than vehicles burning plant oil.

"The fundamental point is airplanes don't have an option," Epstein told EurActiv in an interview in Brussels.

"As Europe becomes greener for power generation, it makes more sense to think about electrification [for transportation]," he said. "In Europe, the automobile trips are shorter, the cars are smaller, so electrification may make even more sense than it does larger parts of North America."

The industry is so convinced of the merits of biofuels that it used the recent sustainable development conference in Rio de Janeiro to stage a media event. Raymond Benjamin, who heads the International Civil Aviation Organisation, landed in the Brazilian city on 19 June after having flown from his base in Montréal on airliners using biofuels.

"I am proud to have been able to serve as a symbolic passenger on this 'Flightpath to a Sustainable Future'," Benjamin said, adding that bio-fuelled aircraft "are one of the many steps aviation is now taking in that direction."

### A not so soft landing

But not everyone agrees that Benjamin's flight was sustainable or even a model for the future

The United Nations Environment Programme warned in a recent report that even though burning plant-based fuels can produce significantly lower levels of carbon emissions, production and land clearing to make way for new crops "may reduce carbon-savings or even lead to an increase."

Bill Hemmings, who monitors aviation policy in Brussels for the green NGO Transport and Environment, agrees.

Hemmings believes the aviation industry could be falling into the same trap as ground transportation in believing that biofuels are easy on the planet. Greenhouse gases emitted during production, he said, added to concerns over the impact of clearing land and tapping water and other resources

needed to sustain fuel plants – especially in developing and emerging nations – may eventually make biofuels more pernicious than traditional fuels.

Such concerns about both direct and indirect impacts from plant cultivation have led Transport and Environment and other environmentalists to press the European Commission to rethink its mandate for 10% biofuel use in ground transport by 2020.

"This huge industry is being built, not on a house of cards, but without a solid foundation and that foundation will shift seismically if indirect land-use change is properly addressed," Hemmings said in an interview. "So why go and build another aviation mountain which is going to have the foundation shaken once this is sorted out."

He also disagrees with Tyler and others calling for more government support of biofuels in aviation, noting that the industry already gets big subsidies — such as tax exemptions for aviation fuels—that could fund development of alternatives fuels.

Magda Stoczkiewicz, director of Friends of the Earth Europe, is also wary of the aviation industry's call for public support of biofuels when the full impact of production, refining and delivery has not been weighed.

"Our position is that for the moment, we don't see how the big amounts of biofuels needed for aviation can be produced sustainably," Stoczkiewicz told EurActiv.

### Under pressure

Still, aviation officials say they have to do something, both to meet passenger demand and reduce carbon emissions in an industry that accounts for the biggest growth in greenhouse gases. They say the price for that shift is high – today's aviation biofuels cost as much as 10 times more than conventional fuels.

Despite the current economic situation, air traffic is expected to double or even triple by 2020 worldwide. The EU wants to cut both carbon dioxide emissions - through its controversial Emissions Trading System - as well as improvements in air traffic management. Globally, international airline associations, airports, navigation service providers and manufacturers have agreed to improve fuel efficiency by an average of 1.5% per year and halve emissions by 2050 from 2005 levels.

Concerns about energy supply and price vulnerability

are other motivators – for instance, the 2011 revolution in Libya sent oil prices soaring despite weakened global demand. An EU-US-backed oil embargo on Iran also could disrupt supplies.

Airlines are already taking steps to cut weight and improve efficiency. Each generation of aircraft being produced by leading manufacturers like Airbus and Boeing are more aerodynamic, lighter and more durable. On the ground, efforts to cut taxi time and delays at the gate save fuel and reduce emissions.

Meanwhile, industry figures show that new engine technology that is just coming onto the market is 16% more efficient than those in use today.

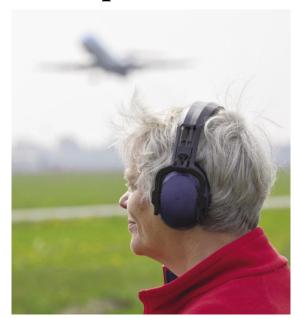
But Hemmings says all this is expensive and by calling for more attention to aviation biofuels, the industry is buying time.

"Everyone is led to believe that there is a tonne of biofuels that will save the world just around the corner, and why go to all this dreadful trouble of [having] to do something else like emissions trading and produce more fuel-efficient aircraft," he said.

"So a lot of it seems to be about that, and that gets up my nose, it's fair enough to sav"



# EU airport noise rules stir up Brussels local activists



A long-standing debate in Belgium over the Zaventem national airport has been reignited by EU proposals to vet national decisions over airport noise restrictions. A local NGO told EurActiv the proposed rules would almost trigger "war" with Flanders if implemented.

Véronique de Potter is a dedicated local campaigner. For years, she has been fighting to safeguard Brussels inhabitants from noise pollution caused by the national airport in Zaventem, a town northeast of the Belgian capital.

Those working in and around the EU institutions in Brussels are familiar with the Zaventem airport, which for many is a trusted gateway to their home

But those living in the city's northern municipalities — including Schaerbeek and Evere—know all too well the noise levels created by the airport's departing flights.

# Planes should fly 'where the cows graze'

To outsiders, the choice of flight routes around Zaventem may appear puzzling. Instead of avoiding the Brussels capital region and its one million inhabitants, flight routes have been designed to avoid the sparsely populated areas of Flanders where the airport – and a few Flemish voters – is situated.

For Véronique de Potter's NGO Bruxelles Air Libre, planes should ideally fly over the green fields and small towns of Flanders, north of Brussels, where they would cause fewer nuisances.

"The least populated areas are those where the cows graze," she told EurActiv in an interview. "So it should in any case avoid the Brussels area."

However, the Flemish region sees it differently. Flanders, de Potter says, will never accept diverting flight routes from the Belgian capital over Flemish territory.

"Go talk about this to the Flemish at the north of Brussels, and you will almost get war," she said.

### Convoluted national decisions

Flight routes around big airports are currently drawn up independently by each country. And those decisions are often controversial.

"Whether you want to have night flights or not is a highly political decision where you have to balance between the national, regional and local levels," said Sergi Alegre Calero, president of the Airport Regions Conference (ARC), an association of local authorities with an international airport situated within or near their territory.

"Our position is that you should have forums where all the stakeholders — including the regions and the NGOs representing the citizens — should be consulted for flight restrictions, but also for flight path, the creation of runways etc," Calero told EurActiv in an interview. "This should be the rule for Europe — you have to create these [consultation] committees and you need to have a democratic debate."

In practice, however, these broad consultations of local population and citizen groups rarely take place, leading some regional authorities to make questionable decisions on flight routes – like in Zaventem.

According to de Potter, this is largely due to the complex organisation of the Belgian state, where the regions make their own decisions on issues related to transport infrastructure although these might have an impact for the country as a whole.

"In Belgium, we have regionalised to such an extent that when the Flemish region – where the Zaventem airport is situated – consults on noise, it consults only the Flemish municipalities that are within its territory and which are located around the airport."

After numerous complaints, de Potter says the Flemish region finally accepted to extend the consultation to other municipalities. But only a handful of the 19 Brussels communes were invited whereas "the entire Brussels region is flown over," de Potter said.

### EU noise restriction rules in the making

Brussels is not the only large European city where local populations suffer from opaque decision-making on flight routes around airports.

In fact, according to Calero, "the vast majority" of European cities have failed to put in place effective stakeholder forums to consult the local population, citing Alicante, Majorca, Paris, Rome and Athens.

At EU level, the European Commission has proposed bringing more transparency into how such decisions are taken.

The 'Better Airports' legislation package, tabled in December, included new EU rules under which the consultation of citizens living around airports would become mandatory, a Commission spokesperson said.

In other words, the EU executive would have a right to cancel a decision on flight routes or a new runway if local populations are not properly consulted.

In Belgium and elsewhere, the implications could be farreaching.

Jörg Leichtfried, an Austrian MEP (Socialists & Democrats) who is in charge of steering the proposal through the European Parliament, said flight routes around Zaventem may have to be redrawn as a result. But he also said there was little enthusiasm among his colleagues for changing the existing rules, which he said were "quite satisfying" overall.

For Sergi Alegre Calero, the Commission is right to seek more transparency in the decision-making process and should be able to cancel a decision if local populations and stakeholders are not consulted.

"We believe Europe has a right – and even an obligation – to say 'No, this decision cannot be allowed'," Calero said. "But if this stakeholder forum is created, the decision of this stakeholder forum should not be questioned by Brussels," he cautioned.

The Commission, he explained, should limit itself "to verifying that the formalities of the consultation" are respected, including on the "composition and scope of the [consultation] Committee".

The Vienna airport, Calero indicated, is a good example to follow. After a five-year consultation process, almost all stakeholders had the opportunity to make their views heard – including the airport, the central government, and the regional authorities. The end result was an agreement to build a third runway, expand the terminal, and measures to handle noise and night flights.

By contrast, Calero said the consultation in Helsinki with Finavia, which maintains a network of 25 airports in Finland, was "very poor".

"The new flight path was defined without any consultation. They went to court, there were endless discussions, and everything was postponed for years."

The decision was eventually brought before a Finnish court, which settled the issue. "But how much time and how much money and worries could have been spared for everyone if the consultation process had taken place in the very first place," Calero lamented.

### Right of scrutiny

At European level, EU member states have shown reluctance to give the European Commission the authority to cancel noise restriction decisions around airports when those fail to take the views of local populations into consideration.

Meeting on 7 June, the EU's 27 transport ministers agreed a general approach on the Commission's proposed regulation, limiting the EU executive's powers to a simple right of scrutiny.

"The Commission will have the right to review the process that the competent authority followed for introducing the [noise] restriction," the Council of ministers said in a statement.

The ministers also decided to gradually phase out the noisiest aircraft, aiming to give airlines an incentive to "replace them with less noisy aircraft since they could otherwise no longer fly to the airport concerned."

National transport ministers did make some concessions however. "If the Commission considers that the process does not comply with the requirements of the regulation, it will send a notification to the authority, which must take due account of the Commission's observations," the Council statement added.

But "the member states will have the last word," a source in the EU Council of Ministers confirmed, adding that "there was an overwhelming majority" to reject the Commission's bid to invalidate noise-related decisions

## Brussels noise problems here to stay

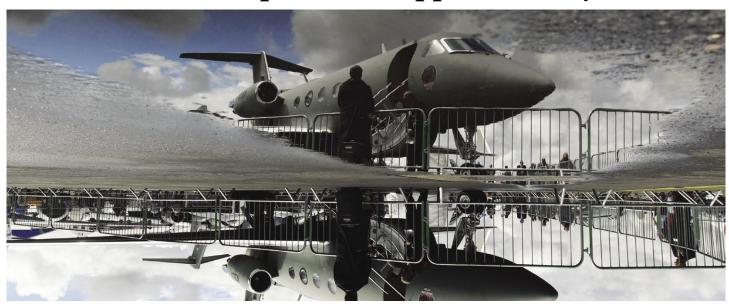
In practice, this means Brussels inhabitants are likely to continue hearing planes departing and landing at Zaventem for the foreseeable

For Véronique de Potter, the only viable long-term solution would be to abandon Zaventem as a national airport and downscale it to handle smaller operations. The airport, she recalls, was built during Nazi occupation in the Second World War and the location chosen at the time was "the worst possible" because of the unfavourable wind directions.

Former Belgian Prime Minister Guy Verhofstadt had proposed building a new national airport near Lille at the French border, she recounts. But the Flemish region rejected the idea because it was "absolutely determined" to keep the national airport on its own territory.

"Although Zaventem was built with federal funds in the origin, it's still their airport," she said.

# Cleaner aviation depends on supplies of dirty materials



From the flight deck to the wheel brakes, new generations of aircraft that produce far less pollution increasingly rely on imported raw materials which are themselves dirty to produce. EurActiv reports from the Farnborough International Airshow.

China and Russia are dominant suppliers of some forms of titanium—a lightweight metal used in airframes and parts—while China holds the lock on production of rare earth metals. Dependable supplies of these resources are vital as European and American airplane manufacturers juggle backlogged orders and address forecasts of exponential growth over 20 years.

"It's an area that is going to increasingly become a challenge in the industry," said Dr Andy Jefferson, programme director at the industry-financed Sustainable Aviation research organisation in the United Kingdom.

"We need to take the lead in developing innovation in a sustainable way," he said on the sidelines of the Farnborough International Airshow in England.

Titanium is an ideal metal for airplane parts and frames because it is lighter and stronger than aluminium, and is highly heat resistant. Some of the 17 so-called rare earth elements and metals are used in computers, aircraft parts and guidance technology.

# Sustainability of supplies?

But supplies are far from guaranteed, independent analysts say, especially as China and Russia reputedly exercise selective trade practices and become potential competitors to the leading European and American aircraft manufacturers.

Last year, as a trade row between the European Union and China heated up over rare earth elements, the consulting firm PriceWaterhouseCoopers produced a survey showing widespread concern among business leaders about the potential for scarce supplies of essential manufacturing components.

"Put simply, many businesses now recognise that we are living beyond the planet's means," Malcolm Preston, who heads the global sustainability for the PriceWaterhouseCoopers, said when the survey results were released in December.

"New business models will be fundamental to the ability to respond appropriately to the risks and opportunities posed by the scarcity of minerals and metals."

Figures from the US Federal Aviation Administration show that demand for one rare earth element used in semiconductors and the aerospace industry – halnium – is nearly exceeding world supplies.

The lightweight beryllium metal used in brake parts and window frames for military and civilian aircraft is on the PriceWaterhouseCoopers 'critical list'.

The European Commission's Joint Research Centre has issued its own warning that Europe's climate goals are threatened by looming shortages of metals that are in high demand and dominated by a single supplier – China.

In two recent cases, the World Trade Organisation told China to ease its export restrictions on metals important to energy, and electronics transport manufacturing. China has claimed its restrictions were partly aimed at limiting environmental damage from mining and processing. But the EU, United States and Japan maintain that Beijing was improperly subsidising domestic prices of rare earth metals and inflating export

China supplies nearly all the world's 17 rare earth elements and metals.

There are also concerns about titanium sourcing. In Washington, a recent report by the Congressional Research Service, an independent arm of Congress, cites foreign dominance of the world titanium market as a potential risk to America's national security.

China and Russia are two of the leading producers of titanium sponge, a raw form of the metal, according to the US Geological Survey. Japan, the United States and Ukraine are also leading producers.

In the global south, analysts fear that conflicts between the government and rebels in eastern Congo could disrupt shortages of tantalum and other important minerals used in computers.

### Reliable supplies so

Aviation industry officials at the Farnborough International Airshow in England, where the greenest passenger aircraft ever built were on show, were hesitant to speak on-the-record about possible threats to the supply of vital raw materials, or about potential competition from emerging aircraft competitors in both Russia and China.

Ray Conner, the new president of Boeing's commercial airplanes division, told journalists that his company had a successful partnership with a titanium supplier in Russia. The world's leading passenger aircraft-maker recently sealed a long-term contract with Russia's VSMPO-AVISMA, which supplies more than half of Boeing's titanium needs.

Airbus also has a deal with VSMPO-AVISMA to provide some 60% of the European company's titanium needs.

Metals like titanium and the rare earths are, from a geological point of view, not rare and were once mined in Europe. But as Sustainable Aviation's Andy Jefferson notes, mining and production is labour intensive and comes with high environmental costs, which means that operations have gradually shifted to countries with lower salaries and regulatory hurdles.

## Competition in the air, too

Besides being leading suppliers of raw materials, the Russian and Chinese are also increasingly competitive in an aviation industry long dominated by the Europeans and Americans.

Russia's United Aircraft Corporation expected to sign off on orders from Asian customers for its Sukhoi Superjet at Farnborough, the company's chief executive, Mikhail Pogosyan, told a news conference. The company is also luring customers in the Confederation of Independent States that had previously turned to Western companies to replace rickety fleets of Soviet passenger liners.

The Superjet 100 is the first passenger plane manufactured in Russia since the end of the Soviet Union, though it has been marred by safety concerns since a crash during a demonstration flight in Indonesia in May killed all 45 people on board.

United is also developing longer-haul MS-21 jetliners that are expected to be operational by 2016, and company representatives say they will be 15% more fuel efficient than comparable aircraft flown today.

Commercial Aircraft Corporation of China, launched in 2008, used Farnborough to show off its ARJ21 regional aircraft and its larger C919, the country's first domestic singeaisle passenger liner.

Fresh competition could spell trouble for Airbus and Boeing – especially in the rapidly growing single-aisle markets dominated by the Airbus 320 and Boeing 737.

Still, Randy Tinseth, Boeing commercial division vice president for marketing, said at the roll-out of the company's annual forecast in Brussels last week, that there is room for competition. Boeing estimates that the world will need 34,000 new aircraft by 2031 and the once-unchallenged European and American companies are now struggling to meet existing demand.

# EU 'committed' to reaching accord on aviation ETS



The European Union is "totally committed" to reaching a global deal on carbon emissions from airlines, the Commission said yesterday (12 July) as efforts resumed to defuse an international row over the issue

Commission President José Manuel Barroso, EU Climate Commissioner Connie Hedegaard and International Civil Aviation Organization (ICAO) President of the Council Roberto Kobeh held talks in Brussels on Thursday.

"The EU is very committed, totally committed, to reaching an agreement that fully respects the conditions that we have put forward," Commission spokeswoman Pia Ahrenkilde Hansen told a briefing.

"We have an objective that is very firm and very clear to reach and to work towards reaching a global agreement."

In the absence of a global scheme to curb emissions from the aviation sector, the EU since January this year has been including all flights in and out of Europe in its Emissions Trading System (ETS).

The decision has led to an international outcry, including threats of a trade war, and the Commission has looked to ICAO to come up with an alternative scheme.

The EU would stop including all aircraft in its ETS either in the event of an ICAO alternative or if other nations prove they have found alternative ways of curbing airline emissions, the Commission has said

"The ETS is there as it stands,

and there is no suspension of this agreement and there should be no action or retaliation against EU carriers," Ahrenkilde Hansen said.

The European Union decided to include aviation in its ETS after years of talks at ICAO had failed to deliver a solution. But Hedegaard has said she stands by the ICAO as the way out of the current dispute.

An ICAO meeting last month achieved limited progress, narrowing its broad focus to three market-based options to address emissions

Apart from nations such as China and India which have accused the European Union of trespassing on their sovereignty, airlines and aviation companies have said the scheme is a threat to them in a difficult business climate.

The International Air Transport Association (IATA) welcomed an ICAO deal on a CO<sub>2</sub> standard for new aircraft as a step towards improved fuel efficiency.

"The ICAO process is working," IATA CEO and Director General Tony Tyler said in the statement, adding ICAO was moving forward with discussions on market-based measures that could provide an alternative to the EU ETS.

But he also criticised the European Commission and its ETS for "putting this process at risk".

"It is a divisive scheme, forced through at a time when the global community needs to unite and deliver a global solution," he said.

# Aviation exec: Biofuels are key to industry's future

The aviation industry has little choice but to turn to biofuels to help meet its commitments to reducing carbon emissions in the decades ahead, argues Alan H. Epstein, an engineer who is vice president for technology and environment at Pratt & Whitney.



Alan H. Epstein is the vice president for technology and environment at Pratt & Whitney, a US-based manufacturer of aircraft engines. The following is an excerpt of an interview with EurActiv's Timothy Spence.

To improve efficiency, aircraft manufacturers have made steady improvements in aerodynamics and using lighter materials. Your business is propulsion - what are you doing to make engines more efficient?

Some of us think that most of the reduction in fuel burn in airplanes actually come from better engines. The engines have improved since the dawn of the jet age by about 1% a year, on average. And some people say that's not very much, but then I would say: what don't you understand about compound interest? And so the latest engines from Pratt & Whitney - which is the geared turbofan - are actually about 16% better than the ones that are flying today. So that's a big step, but it took us 20 years to get there.

Road transport is the largest contributor of greenhouse gases, but the growth of aviation emissions exceeds all other sectors. Is there a point in the future where you see that changing, that growth declining and

if so, how do you do it?

Let me amend your statement. The biggest percentage growth has been in aviation, the biggest growth is still ground transport. ...

Air transportation is more efficient in terms of CO<sub>2</sub> than driving a large SUV or even a small car. It's more efficient than a diesel locomotive. It's not more efficient than the TGV in France – run mostly by nuclear energy – but it's the most efficient way of getting long distances and you could say, why is that? It's a big airplane, it's 100 tonnes, it's travelling eight-tenths the speed of sound.

The answer is there's a trick, and the trick is for all vehicles – cars, buses, trains and airplanes – once you get above 80 km per hour, 90% of the energy or more goes to pushing the air aside, so it's all air drag. And the trick with an airplane is, you go up high enough in altitude where there is almost no air, so there's not much drag, so that's why they're such an efficient way of moving people.

That's the peculiarity of air transportation. Efficiency is ... economic return to the airline, so they have every incentive to absolutely minimise the amount of fuel burn and CO<sub>2</sub> produced.

One of the big changes in aviation is biofuels, and it is at a very maiden stage. Is an airplane able—without any modification to the engine—is an airplane either able to use a fossil fuel or a biofuel without changes?

Simple answer: yes. It think it was a mark of collective genius between the fuel people, the aviation people, the engine people, the airplane people to make the idea of a drop-in fuel a reality. A drop-in fuel is a fuel that I can put any place in the supply chain – in the big tanks at airports, in the tanker trucks – and the airplane and the engine don't care at all.

And then we did something more clever, I thought, although it seems trivial in retrospect. Instead of saying that you can use this new fuel, all we did was modify the definition of fuel so that all the airplanes in existence,

all the engines in existence which reference some arcane specification don't have to be changed. [Instead,] we've changed the definition of that specification. So we did it first with cold liquid fuel in the middle of this last decade — and that was for energy independence — and now we've done it for the first biofuel, which is defined by how you make it not what's in it. ... The engines are agnostic to what the source of the biomass

### It's possible to mix traditional kerosene with biofuels, and it makes no difference to safety?

The requirement now is that you can't have more than 50% biofuel mix. The reason is we're extraordinarily conservative when it comes something like flight safety. For 100 years of aviation, all the fuels have been fossil-fuel based ... as we gain more experience, you would expect to relax that [50-50] specification.

Certainly we have run tests with much higher concentrations of biofuels ...

# ... and there is no difference in performance and safety?

Safety is unquestionably the same. Few people realise how variable jet fuels is – how variable petroleum is around the world. You drive your car in South America, it's actually different than in Europe and a different fuel than in North Asia versus South Asia, and jet fuel is much the same.

So at the moment, the biofuel we've tested is actually a slightly better fuel, and if you could guarantee to me that all my engines would burn this biofuel, I could actually reduce the fuel consumption a little. At the moment I haven't figured out how to do this, with this undefined mixture, where I land in Los Angeles and it's all biofuel, I land in Tokyo and it's all fossil fuel, I land in Frankfurt and it's a 50-50 blend. We haven't figured out how to do that.

Certainly biofuel is in no way inferior to conventional fuel.

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# Does this translate into a greater efficiency and a reduction in emissions?

For pure biofuels there is a reduction in particulates – smoke – which are regulated and is important. There doesn't seem to be a difference in oxides of nitrogen. And fuel efficiency is an open question, because of the wide variety of fossil fuels [used in the blend].

# There is increasing concern here in Europe about the origin of biofuels. Is that something that concerns you as you produce engines that can burn these types of fuels?

It used to until we defined biofuels to mean sustainable biofuels. ... So when we talk about biofuels now, we mean sustainable. And sustainable at the very minimum means it doesn't interfere with food and food prices, and it doesn't interfere with water.

### What about land impact?

Things get very complicated, and I'll leave it to the experts as to how land use and landuse policy is affected. But certainly no one in their right mind would say, if you went and ploughed under rain forest and used it to produce fuel, that that would be a sustainable fuel. It certainly isn't.

One of the concerns in the industry is the supply, and there are government policies in the US and Europe that in effect subsidise biofuel

### production -

- but not for airplanes.
- for ground transport.

  Is there competition between the fuels for the people on the ground and people in the air?

Sure.

# Is that affecting the ability switch to a cleaner jet fuel?

The fundamental point is airplanes don't have an option. Airplanes need biofuel, maybe biofuel doesn't need airplanes. Cars, we can electrify. Electricity we can make from renewable sources or nuclear sources, we don't have to burn fossil fuels.

Airplanes need a liquid hydrocarbon fuel. In the past this liquid hydrocarbon has been a fossil fuel. ... Solar energy – you can't cover an airplane with solar cells and get it to fly very far or very fast. You can do a one-up demonstration, but on the planet Earth you can't fly passenger airplanes with solar cells

But I can solar power the airplane by collecting solar energy and turning that into a liquid hydrocarbon where the carbon comes from the atmosphere. That's exactly what a plant does. I could use a big industrial plant and harvest the CO<sub>2</sub> from a coalfired power plant, and I could even take nuclear energy and synthesise a hydrocarbon from it. Mother Nature, though, does most of the work for us with plants.

The challenge is there is very little biofuel now. So how do you make more biofuel in a sustainable way? I think it's through technology. But it's biological technology, not airplane and engine technology. . . .

### How much land does it take to grow enough fuel for one flight – say from Washington to Brussels?

The answer is a lot. You get a couple hundred gallons per acre a year. A very large airplane might have 20,000 to 40,000 gallons of fuel, so if you just took current land, you'd need most of Europe to grow biofuels for Europe – just for aviation. ...

Aviation has committed to carbon-neutral growth after 2020. And if we start to grow again at 4 to 5% a year, the new equipment like the Pratt & Whitney geared turbofans [engines] will give you 1 or 2% a year – the average of aviation has been about 2% per year reduction in fuel burn – but the only way you can cover 4 or 5% is to go to a low-carbon fuel.

There is no other option for aviation to stop the growth in CO<sub>2</sub> than to go to a low-carbon fuel. We're the most organised, focused group on the planet due to a) safety and b) the economic returns, so we're going to do it.

Most of the fuel in Europe and North America is concentrated in very few places, so it's an ideal way to start up a new industry where you don't have to worry about side distribution channels.

Europe has a commitment to 10% biofuels in ground transport by 2020. If you scoop that away from ground transport and dedicate that to aviation,

### does that make a big difference?

Yes, it solves the aviation problem ... but it's a different fuel

... it's a different fuel and refining process. But does it give you what you need?

The short answer is just about yes.

Is there any conflict between the industries – the auto and the aviation industry – over biofuels? Or with policymakers in the EU, where you say: 'look, rethink where you are putting your biofuels'?

I'm a naïve American, so I have no idea how you pressure anybody in the EU.

Education, however, is sometimes helpful. In the United States, the Department of Energy has decided that the future of ground transportation is electrification. There were other options, fuel cells for example. As Europe becomes greener for power generation, it makes more sense to think about electrification [for transportation]. In Europe, the automobile trips are shorter, the cars are smaller, so electrification may make even more sense than it does larger parts of North America.

In terms of the global environment, you could say it doesn't matter if I'm saving a million tonnes of CO<sub>2</sub>, it doesn't matter whether it's from aviation or the ground as long as it's a sustainable biofuel.

# What percentage of flights today are using biofuels?

It's miniscule. For example, Lufthansa had a regularly scheduled Frankfurt to Hamburg run ... and they basically scrambled to get as much biofuel as they could.

There is very little biofuel now, and it is very expensive. But it has only really been a year since it has been legal to use it on commercial flights.

The next biofuel mark will be a new kind of biofuel that we are working to certify ... that's called alcohol-to-jet [ATJ]. And this doesn't mean we are taking the vodka from the world's martinis and using it to power airlines, although that's perhaps feasible in some sense. It's cellulosic - plant waste, the corn stalks left over, the stuff you throw away now can be processed into biofuel, and that's a way to vastly increase the supply and the economic return to the farmers is - you sell the corn, you sell the corn stalks. So within a next couple or three years, I expect those biofuels to be certified.

# This 1% improvement in efficiency that you've seen in commercial aviation for 60 years, does that continue, does it drop off or does it go up?

Efficiency in converting energy in the fuel, of pushing the airplane. We're now about 40% efficient – taking the theoretical energy in the fuel and using it to push the airplane. The first jet engine was 10%. The law of thermodynamics, which I won't burden you with, defines a limit to how efficient things are and it's not 100% - it's about 80%.

We're now at 40%, so we're now halfway to the goal. So there's enough headroom ahead of us in the next 40 or 50 years of jet travel as we've had in the last 50 years in terms in improvement.



# Campaigner: Flanders 'will almost go to war' over Brussels airport

Flights over Brussels should be more severely restricted in order to protect inhabitants from excess noise levels, says Véronique de Potter from local campaign group Bruxelles Air Libre. But she says the Flemish region, where the airport is situated, "will almost go to war" if flight routes are diverted from the Belgian capital to fly over Flemish territory.



Véronique de Potter is President of the Bruxelles Air Libre asbl and administrator, of the European Union against Aircraft Nuisance (UECNA). She was speaking to EurActiv's editor Frédéric Simon.

The following interview is available in French only.

### La Commission européenne a proposé en novembre un nouveau règlement sur le bruit autour des aéroports. En quoi cette législation vous intéresse-t-elle?

Je suis aussi administratrice à l'UECNA qui est l'Union Européenne contre les Nuisances des Avions, qui chapeaute la plupart des groupes nationaux. Et donc on a rencontré nous même un rapporteur de la Commission qui s'est occupé justement d'examiner ce 'Better Airports' package.

Les choses qu'on a constaté c'est que l'objectif non déguisé de la Commission c'est d'améliorer l'exploitation de la capacité des aéroports, ils n'en font pas mystère. Ils parlent de bruit mais ils disent aussi qu'il faut un équilibre entre les problèmes de bruit et de compatibilité avec la vie des riverains et les intérêts économiques, ils n'en font pas mystère. Donc ça nous chipote déià beaucoup.

Le but est aussi de retirer la directive 2002/30 par un règlement ce qui a mon avis n'est pas une bonne idée non plus, en principe directement applicable. Mais clairement ce qui manque – et manquait déjà dans les directives précédentes – c'est qu'il n'y a pas de chiffres. Il a y eu des méthodes de mesures mais il n'y a jamais eu des objectifs chiffrés, ni de dates.

# Vous voulez dire une limitation des décibels à un certain niveau?

Oui, l'organisation mondiale de la santé a fait des recommandations qui sont reconnues et acceptées et la Commission ne les reprends jamais. Il y a aussi les créneaux (les slots). On est u n peu désolés que la Commission ne reprenne pas cela pour rationaliser l'utilisation des aéroports dans les endroits où ça pose problème. La Commission veut aussi accélérer la modernisation des flottes par des avions dits 'chapitre 4' qui sont moins bruyants.

Alors, on se focalise toujours sur le quota de bruit individuel des aéronefs. Moi, j'ai été voir plein d'aéroports à Vienne, à Amsterdam, le problème c'est un peu comme pour les voitures. Si vous avez dix voitures bruyantes qui passent dans votre rue sur une journée, eh bien c'est beaucoup plus supportable que d'en avoir mille moins bruyantes qui passent devant chez vous. Le problème est aussi le nombre, et ca on n'en parle jamais, ce n'est pas tout de remplacer des avions anciens des années soixante.

Ce qui m'a frappée à Amsterdam par exemple c'est que les gens disaient : 'Nous le problème c'est le nombre, ce n'est pas tant le bruit individuel des avions'. Et tout le progrès acquis par la diminution du bruit individuel des aéronefs est gommé par le nombre croissant des mouvements. Or, ce problème la n'est jamais évoqué. Et l'OMS dit exactement la même chose.

La Commission affirme vouloir améliorer la transparence dans les prises de décision au niveau local afin de limiter le bruit autour des aéroports. Estimez-vous que les décisions prises à Zaventem ont été suffisamment transparentes?

Le problème en Belgique c'est aussi la régionalisation et donc l'émiettement des compétences. En Allemagne et en Suisse qui sont des états fédéraux ou confédéraux, toutes les grandes infrastructures comme les autoroutes, les tunnels, les gares, les chemins de fer et les aéroports, continuent de relever de l'état fédéral et s'appliquent à l'ensemble du territoire.

En Belgique, on a régionalisé à tel point que lorsque la région flamande, sur lequel se trouve l'aéroport de Zaventem, consulte en matière de bruit, elle consulte uniquement les communes flamandes qui sont sur son territoire et qui se trouvent autour de l'aéroport.

Mais on a dû contester à plusieurs reprises pour que la consultation s'étende à Bruxelles puisqu'elle est survolée.

Le problème c'est que la Belgique est un petit pays avec des compétences très régionalisées qui font que les consultations s'arrêtent à des frontières intérieures qui ne correspondent pas à la réalité du transport aérien.

### Dans le cas de Zaventem, est-ce que tout le monde a été consulté en fin de compte?

La dernière fois que la région flamande a fait une consultation, je crois que c'était au sujet du règlement d'exploitation de l'aéroport, la première consultation s'étendait uniquement aux communes flamandes riveraines de l'aéroport, rien pour Bruxelles.

Alors, on a poussé des hauts cris en disant que c'était scandaleux et puis ils ont consenti à consulter quelques communes mais toute la région bruxelloise est survolée.

Selon le règlement proposé par la Commission c'est une obligation de consulter toutes les populations concernées. Et selon le projet, une décision peut être annulée si cette transparence n'est pas respectée...

Mais le problème c'set que, les compétences régionales en Belgique étant ce qu'elles sont, il faudrait que ce soit organisé par l'état fédéral qui n'a pas de compétences en la matière. C'est ça le problème.

Un aéroport, il y a une différence entre sa capacité au sol qui peut être d'autant de kilomètres carrés et l'espace aérien qui est utilisé par cet aéroport. Et tout ça ne se recoupe pas de manière logique.

En plus, à Bruxelles, quel que soit le système de décision, le problème est rendu complètement impossible a gérer par le fait que – en raison justement de ces compétences régionales – on a laissé bâtir tout autour de l'aéroport, ce qui le rend inutilisable pour les objectifs qu'il se propose d'atteindre.

Donc tout cela relève d'une hiérarchie des compétences en Belgique, donc je ne vois pas comment la Commission pourrait intervenir. Ou alors il faudrait qu'en Belgique on 'refédéralise' certaines décisions en matière d'aménagement du territoire...

En tout cas, c'est bien ce que semble proposer la Commission. En suivant sa logique, la décision de la région flamande devrait être déclarée illégale pour manque de transparence dans la consultation...

Oui, c'est une possibilité. Mais j'entends beaucoup de gens qui sont sceptique quant à la possibilité d'octroyer à la Commission un pouvoir de décision.

Nous, chaque fois qu'on est allé voir la Commission (à l'époque la DG TREN), ces gens avaient tendance à dire que les transports aérien est une compétence qui relève essentiellement des états et qu'ils n'avaient pas l'intention d'y changer quoi que ce soit.

Alors maintenant, qu'elle vienne avec cette décision en matière de bruit, a priori c'est une bonne chose, mais en même temps son objectif bien avoué c'est d'utiliser au mieux la capacité des aéroports...

## ...ce qui serait la contrepartie.

Oui, mais il est avéré par plein d'études qu'augmenter les capacités de transport aérien n'augmente pas parallèlement le nombre d'emploi ni le bénéfice économique qu'en tire l'état. Au contraire, il apparaît clairement que l'augmentation du transport aérien accélère la fuite des investissements, des capitaux et de l'emploi vers les pays étrangers. Donc quelle est l'utilité? La Commission dit qu'elle veut répondre à la demande des voyageurs. Excusez-moi mais ça ne me paraît pas pertinent par rapport au bruit. En plus la logistique et les transports aériens sont des secteurs à faible valeur ajoutée qui coûte cher en termes d'emploi et en même temps représentent une faible valeur ajoutée.

En plus, les exploitants des aéroports eux-mêmes le disent, la capacité théorique d'un aéroport – la dimension des infrastructures au sol, les pistes, etc. – n'a rien à voir avec la capacité environnementale. C'est-à-dire si un aéroport est complètement bâtit tout autour, vous pouvez oublier la capacité théorique, elle ne sera jamais exploitable. Et à Bruxelles c'est particulièrement flagrant.

A Charleroi et à Liège, la région Wallonne a exproprié les résidents alentours et isolé l'aéroport. A Zaventem, il n'a jamais été question de faire le moindre effort de ce côtélà. A l'aéroport d'Atlanta aux Etats-Unis, ils ont racheté des quartiers entiers pour justement pouvoir augmenter la capacité de l'aéroport. Ici, il n'en est pas question. Alors, on peut consulter les populations mille fois, tant qu'il n'y a pas de décision pour la protection des populations, tout ça c'est du pipeau...

Si on fait abstraction de la situation administrative un peu compliquée en Belgique autour de Bruxelles, y aurait-il un plan de route idéal pour l'arrivée des avions sur Zaventem, qui épargnerait au mieux les zones les plus peuplées ?

Les zones les moins peuplées sont celles où paissent les vaches. Donc ça devrait de toute façon éviter l'agglomération bruxelloise. Alors, allez parler de ça aux Flamands au nord de Bruxelles et vous avez la guerre ou à peu près...

Ceci dit, on a beaucoup bâtit dans la périphérie de Bruxelles. Mais contrairement à d'autres villes où on considère que la périphérie fait partie de l'agglomération et que tout ce qui est bâtit forme la ville, ici non. Or pour un géographe ou un sociologue, la périphérie fait partie de Bruxelles.

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Ce n'est pas un hasard si à Munich ils ont déplacé leur aéroport, à Oslo aussi. En fait, il ya longtemps que Zaventem n'aurait plus dû avoir un tel niveau d'activité là où il se trouve.

Pour ce qui est des routes alternatives on a tout étudié. Le problème est insoluble.

Oui, mais la Commission européenne a proposé des solutions. Peut-être que le niveau européen, avec ces critères de consultation et de transparence, peut intervenir utilement dans ce débat?

Moi, les gens que j'ai rencontré à la Commission, ils ne sont pas près à se mouiller là dedans. C'est ça qui m'étonne par rapport au projet de règlement.

### Si on suit leur logique, les routes actuelles autour de Bruxelles devraient être changées...

Oui, mais ou faire passer les avions? C'est un double problème. D'abord cet aéroport a été revendu, d'abord à la banque australienne McQuarrie qui l'a revendu au fonds de pension des instituteurs de l'Ontario au Canada. Donc cet aéroport n'est plus public, l'état garde une part mais il est désormais privatisé. Donc, il suit les routes que lui dicte Belgocontrol, mais pour le reste

c'est un aéroport privé.

Pour ce qui est des routes, je crois que toutes les associations et les experts se sont penchés dessus. Le nouveau terminal a été bâtit sur une des pistes qui aurait pu être utilisée pour éviter Bruxelles. Il y avait une piste qui existait et elle a été utilisée pour construire le nouveau terminal.

En plus, toutes les routes possibles et imaginables doivent aussi tenir compte des normes de vent. L'aéroport de Zaventem a été installé par l'occupant allemand pendant la 2ème guerre mondiale à l'est de Bruxelles, ce qui est la moins bonne configuration possible, puisque les avions doivent idéalement décoller et atterrir face au vent. Vous ne pouvez pas décoller et atterrir avec n'importe quel vent - vous ne pouvez pas avoir du vent arrière pour atterrir - vous ne pouvez pas faire ce que vous voulez.

Alors le choix qui devrait être fait à Bruxelles – mais ça relève encore une fois des états nationaux – c'est de choisir une activité pour cet aéroport qui soit compatible avec son environnement. Ça, c'est le vrai choix, c'est pas de faire des pistes à gauche ou a droite.

Zaventem, c'est aussi un aéroport qui ne peut pas fonctionner la nuit, c'est comme Orly.

### Pourtant, il fonctionne quand même la nuit.

Oui, il y a pas mal de vol de nuit mais moins qu'avant parce que DHL est parti à Leipzig. Ceci dit à Leipzig, les gens ne sont pas heureux, ils ne sont pas convaincus que l'augmentation du nombre d'emplois compense les inconvénients. Pour le moment, vous avez des manifestations monstres à Francfort, à Munich, à Nantes en France – les gens commencent à se dire qu'ils ne voient pas l'intérêt de tout ça.

Donc quelle est la finalité? Plus d'emploi? Augmenter le nombre de mouvement ne fait pas doubler le nombre d'emploi, ça c'est clair. Et la pollution aussi. Donc les gens commencent à penser autrement, les gens veulent toujours voyager mais ils se disent que ça ne va plus.

Et transporter des marchandises c'est bien joli, mais ça ne procure pas plus d'emplois ici. Dans cette histoire, je ne vois pas de finalité autre que de mieux exploiter les aéroports pour répondre à la demande et aux désirs des voyageurs.

Les aéroports régionaux ont tout de même permis un essor touristique dans des régions qui n'étaient pas faciles d'accès, notamment les destinations qui sont desservies par Ryanair.

Oui et le résultat c'est que tous les anglais un peu fortunés ont racheté le sud-ouest de la France. Je ne sais pas à qui ça bénéficie. Il ne faut pas oublier que le transport aérien, en vertu de la Convention de Chicago de 1944, n'acquitte pas de droits sur le carburant (kérosène) ni de TVA, ce qui en fait un moyen

de transport subventionné par les fonds publics qui génère de facto un manque à gagner pour les budgets nationaux.

Pour ce qui est de Ryanair, ils exigent des subventions pour s'installer et lorsque les communes décident de ne plus payer ces subventions, ils plient bagage et ils s'en vont, donc ils vivent de l'argent public.

Il y a aussi le problème des salaires – on localise les pilotes là où les conditions sociales sont les plus faibles. Je veux dire, le low-cost c'est un secteur qui sent le souffre, En plus, le low-cost est dépendant des prix du pétrole et je peux vous dire qu'il ne va pas descendre le pétrole donc je ne sais pas comment ils vont faire leur marge...

Pour vous la solution à Bruxelles, ce serait de transformer Zaventem en un aéroport local et d'en construire un neuf à l'extérieur de la ville?

Il avait été question à un moment d'utiliser une piste militaire non-utilisée qui se trouve au siège du SHAPE à Chièvres, la base militaire de l'OTAN dans le Hainaut, à michemin entre Bruxelles et Lille, à proximité de la ligne de TGV Bruxelles-Paris et de la frontière linguistique, mais malgré tout situé en région wallonne.

Il avait été question d'un aéroport en partenariat avec Lille. Je crois que Guy Verhofstadt l'avait proposé. Mais l'aéroport était situé en Wallonie, à un jet de pierre de la frontière linguistique et les flamands se sont levés comme un seul homme en disant que c'était hors de question. La Flandre est absolument décidée à avoir ses pôles que sont Anvers et Zaventem alors que malgré tout le trafic entre les deux ne fonctionne pas bien. Et malgré que Zaventem ait été construit avec des fonds fédéraux à l'origine, ça reste leur aéroport.

Donc oui on avait proposé, mais ces propositions ont été mises au frigo.

De toute façon, la Belgique est tellement régionalisée, qu'on a cinq aéroports qui vivent tous leur vie dans leur coin et il n'y a aucune rationalisation entre ces aéroports. Mais le problème existe ailleurs, en France vous avez des chambres de commerce qui gèrent des aéroports et tout cela n'a aucune rationalité. En Ile de France, on concentre plein de choses, il y a trop d'aéroports, il y a trop de mouvements, et ca n'est pas du tout rationnel.

Donc quelque part, le transport aérien, c'est chacun pour soi dans son coin. Ca n'est pas comme les chemins de fer où il y a une planification nationale. On a même construit en Espagne des aéroports au milieu de nulle part qui ne servent à personne et qui ont consommé des fonds publics, notamment européens. Je crois que c'est une manne qui finira par se tarir tôt ou tard, le transport aérien n'est pas une promesse d'avenir.

Donc voilà, pour Bruxelles, des routes idéales, il n'y en a aucune, c'est impossible.



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