



AIRPORTS COUNCIL
INTERNATIONAL

WHY CONNECTIVITY MATTERS



WHERE

DO YOU

WANT

TO GO?

AND HOW SOON DO YOU WANT TO GET THERE?

Over the past 20 years, connectivity has become ever more linked to the way in which economic growth is generated across the World. Alongside the virtual connectivity afforded by the internet and the digital revolution, **aviation is the prime and unsurpassed enabler that connects the people, places and products of the real world**. This means that trade, tourism, foreign investment and increased productivity are all closely related to the level of air connectivity.

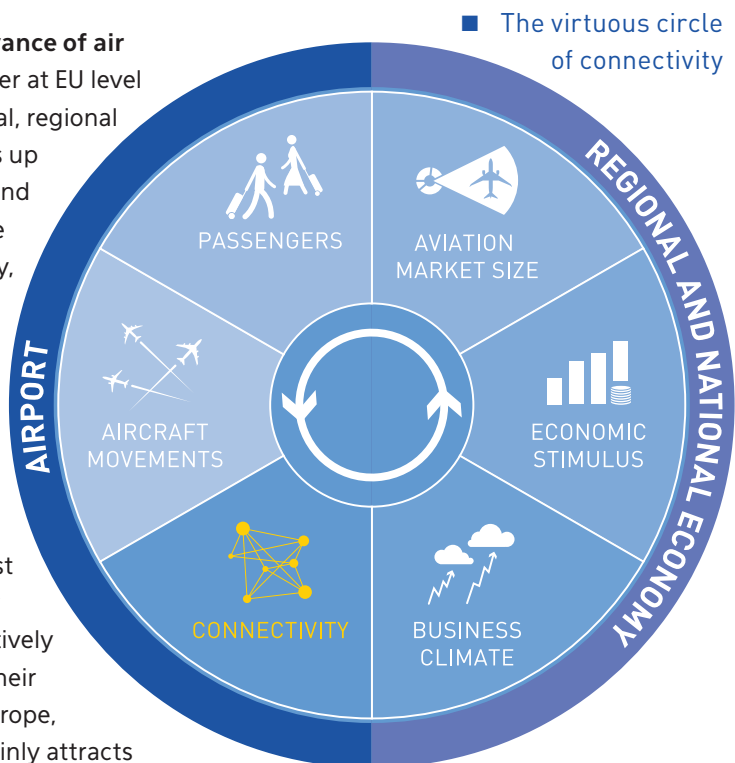
For Europe, air connectivity is of an even greater strategic relevance. The past decades have seen a **gradual shift occurring in the global economy**, with new economic powerhouses moving the pillars of trade eastwards. Europe will not be able to avoid this shift, but we can still ensure that we remain closely connected to the new potential sources of prosperity.

local interest, with limited consideration or thought of the network effect, or the implications for EU connectivity.

More worryingly, the empowering role of air connectivity has yet to be recognised as part of the EU's Growth & Jobs agenda. **How long can the EU afford to ignore such an essential part of the equation?**

The **increasing strategic relevance of air connectivity** doesn't just matter at EU level – it trickles down to the national, regional and local levels – where it ends up shaping the fortunes of cities and regions, as well as the mandate of every airport. Fundamentally, connectivity is the metric by which airports and their communities live – being both a business and societal imperative.

Globalisation has undoubtedly prompted an increasing interest in air connectivity – with many countries around the World actively weaving air connectivity into their national economic policy. In Europe, supporting air connectivity mainly attracts



1. HOW WE MEASURE CONNECTIVITY

But what is exactly air connectivity? How can it be measured? And how well connected is Europe? The ACI EUROPE Airport Industry Connectivity Report 2004-2014* provides the answers to these questions.

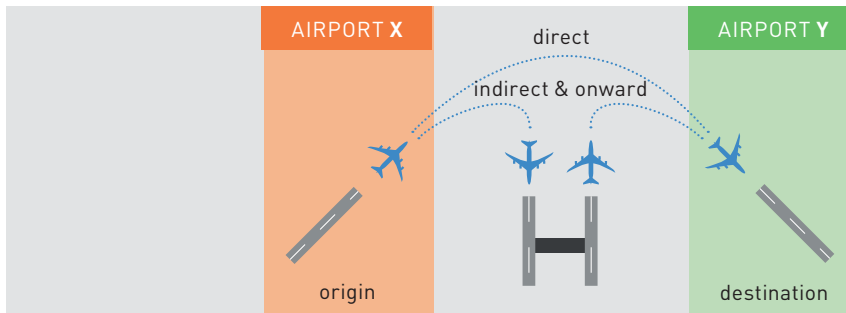
Released in June 2014, the report provides, for the first time, a comprehensive measurement and analysis of the way Europe's air connectivity has evolved over the past 10 years.

Using the SEO NetScan connectivity model, the report provides indexes for **direct**, **indirect and hub connectivity** based on both quantitative and qualitative metrics. The airport connectivity index is made up of

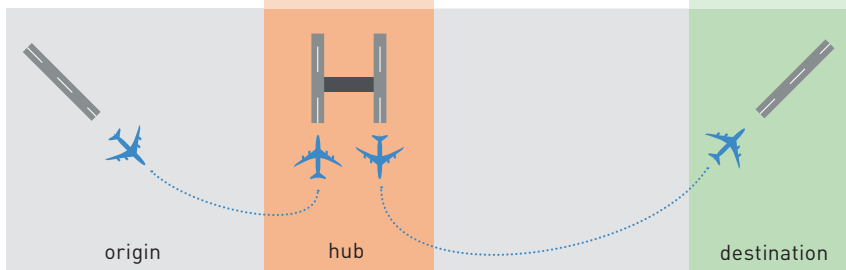
both direct and indirect weekly frequencies weighted by their quality.

This means that this is not simply a measure of how many city pairs there are, or how many direct services there are. For the purposes of this report, connectivity is a measure of the number of destinations, the frequency of services and the quality of the connections (in the case of hubbing or indirect services).

■ Airport connectivity



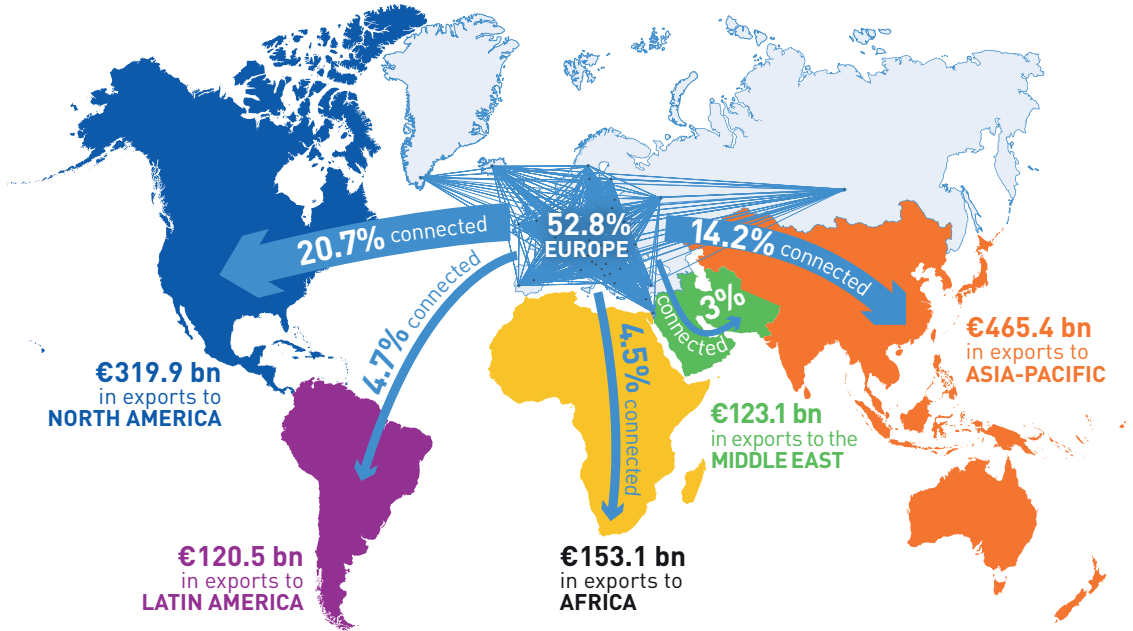
■ Hub connectivity



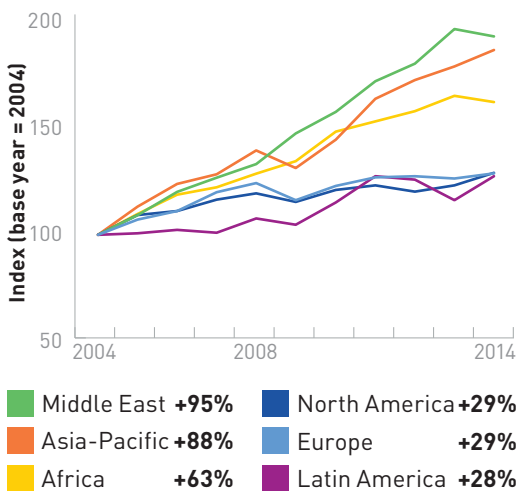
* To download the full report, go to <http://bit.ly/1u9HUxq>

2. EUROPEAN AIRPORT CONNECTIVITY AT A GLANCE

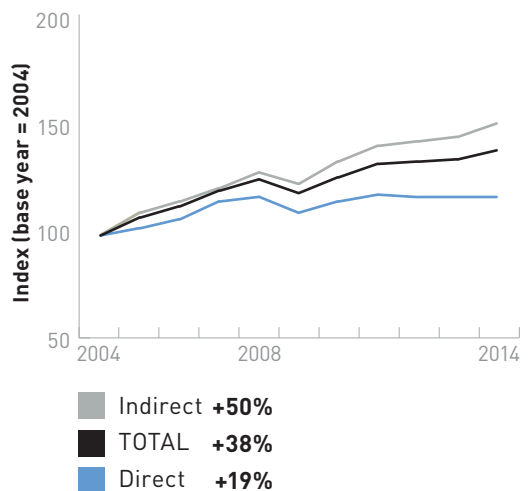
■ Europe's connectivity to the world¹



■ Total Airport Connectivity by world regions (2004-2014)

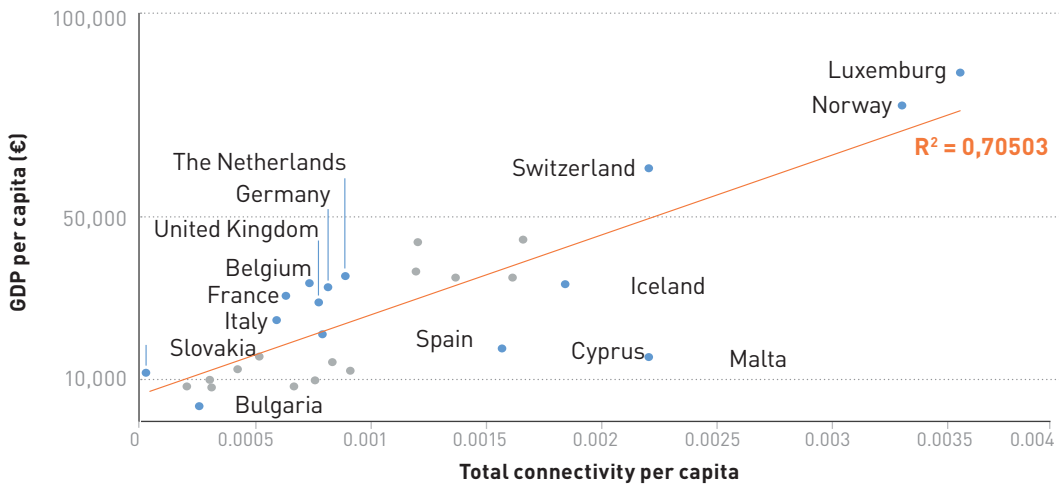


■ Connectivity between Europe & the rest of the world (2004-2014)



¹ Export data sourced from Eurostat as updated on 25 May 2014, and refers to 2013 EU exports to the respective global regions, as per ACI definition of world regions.

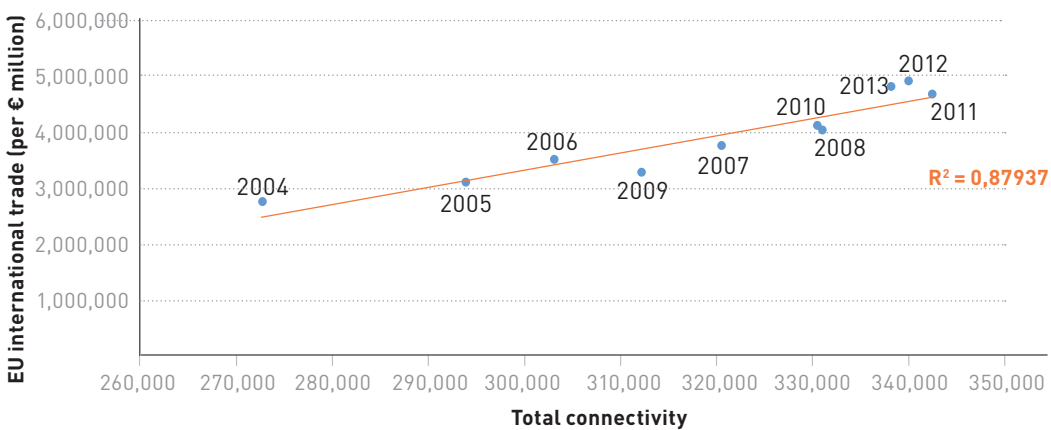
■ Total connectivity per capita vs. GDP per capita



The above graph shows the close correlation between how well connected by air a country is, and its level of wealth. Both connectivity and Gross Domestic Product (GDP) figures

are on a per capita basis, showing that high levels of GDP per capita as well as geographic positions positively influence connectedness of a country relative to its size.

■ EU international trade vs. total air connectivity (2004-2013)

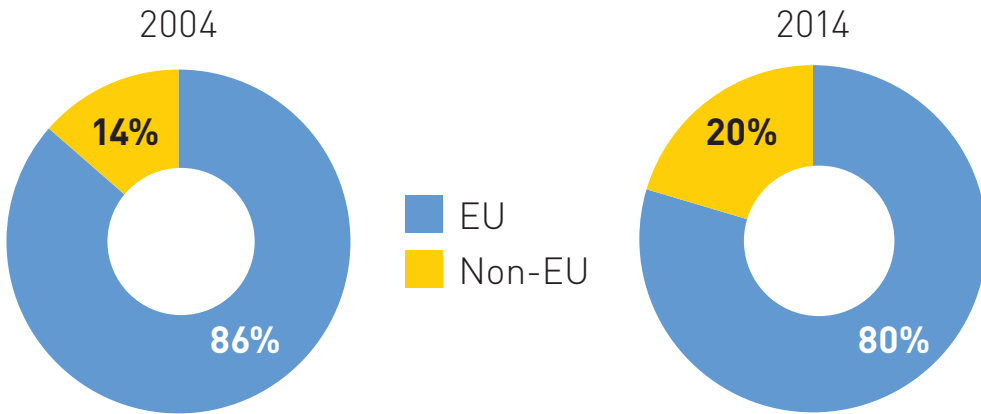


The increased wealth per citizen is delivered via a number of different streams, but one such key and tangible stream is international trade. Exports in goods and services facilitated by connectivity allow the creation of jobs which would otherwise not be available. Imports facilitated by connectivity allow citizens a wider choice of high value goods.

There is a strong relationship between the EU's overall air connectivity to other global regions and the overall value of trade between the EU and these regions. When EU connectivity and trade figures for these global regions are examined individually across time, this strong relationship continues to prevail.

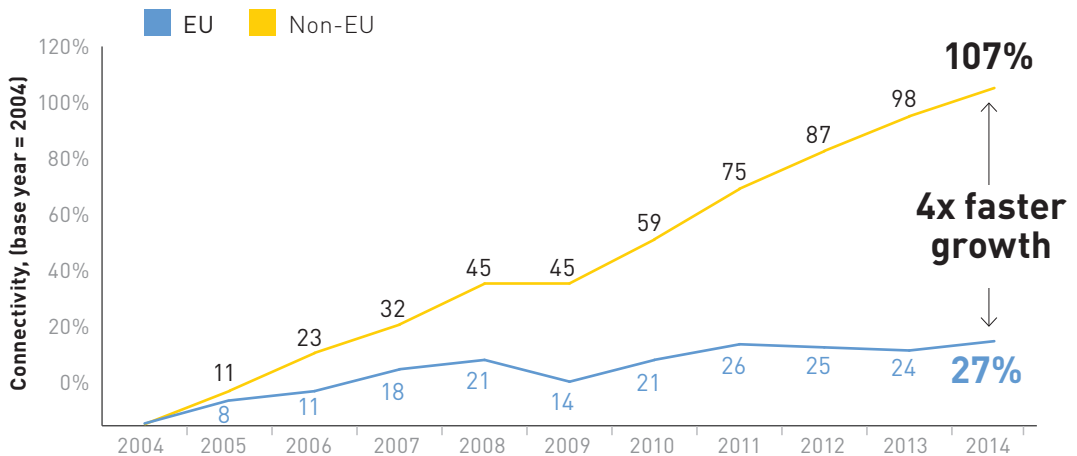
EU & Non-EU markets

■ Market share of EU & Non-EU in overall connectivity (2004 vs. 2014)



The **EU** still accounts for **80%** of the total airport connectivity available from Europe, while **Non-EU** countries only account for **20%**. However, a progressive rebalancing has taken place over the past 10 years, with Non-EU airports increasing their connectivity at a much faster pace than EU airports (**107%** v. **27%**). This contrasted performance reflects differences in the maturity of the economy and aviation markets, as well as the impact of the recent financial and sovereign debt crises.

■ Increase in overall connectivity at EU & Non-EU airports



The EU is losing out on direct connectivity

There is an even wider gap in the way connectivity from EU and Non-EU airports has developed since the 2008/2009 financial crisis, with non EU airports led by Turkey and Russia growing their connectivity at a rate which is almost ten-fold that of EU airports (+42.6% v. +4.7% between 2008 and 2014). But the more worrying trend is the way in which connectivity has performed at EU airports since the financial crisis. Overall, **while total airport connectivity (direct + indirect) has just recovered above its 2008 level, it has essentially been flat since 2011.**

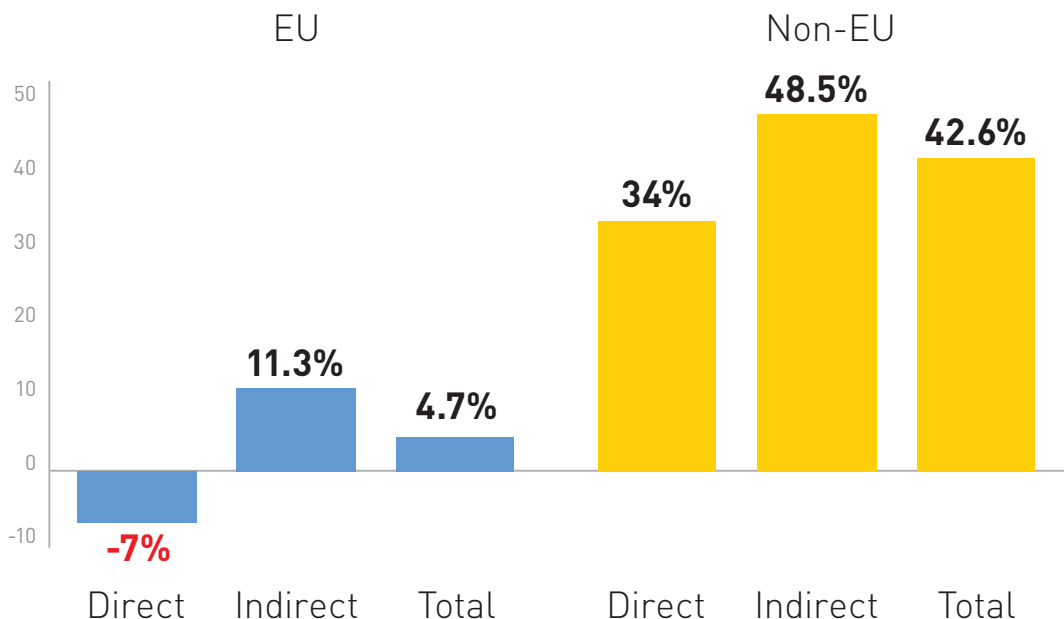
This rather weak recovery results from the fact that **direct connectivity** has actually decreased by -7% since 2008, while **indirect connectivity** grew by +11.3%. The contrast is significant with Non-EU airports, where direct connectivity has increased by +34% and indirect connectivity by +48.5% over the same period.

This substantial net loss for the EU in direct connectivity is indeed a cause for concern. From the perspective of the travelling public, businesses and public authorities, direct

connectivity is generally considered of more value than indirect connectivity. The key rationale for that rests with the fact that direct connectivity delivers reduced travel times when compared to indirect connectivity – which in turn delivers increases in efficiency and productivity.

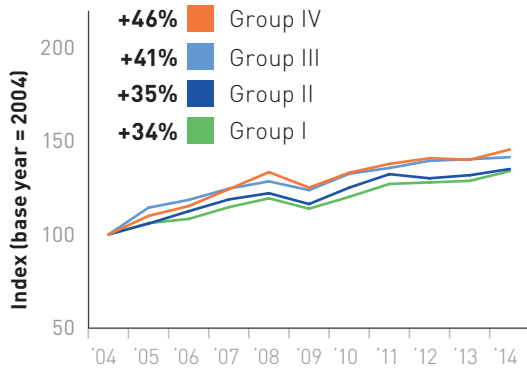
Therefore, aside from the fact that the EU has not seen any connectivity gains since 2011, it has also seen a deterioration of the overall quality of its connectivity.

■ Direct connectivity (2014 vs. 2008)



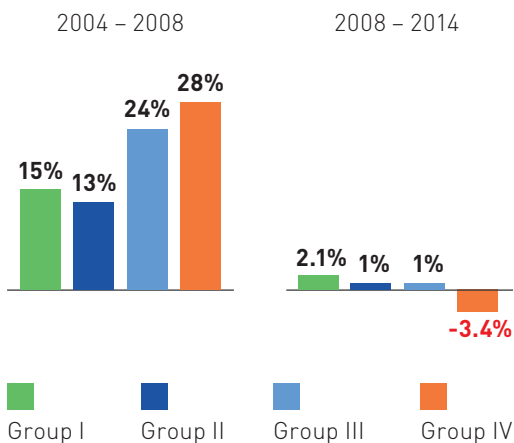
Hubs & larger airports are more resilient

Total connectivity by airport group (2004-2014)



Over the last 10 years, **small regional airports** have registered the **highest increase in connectivity (+46%)**. This reflects the dynamic development of low cost airlines, which have opened up new direct connections out of these airports (+23% in direct connectivity). It also reflects the increased opportunities offered for these airports by the so-called network impact – through connections via larger airports, partially as a result of the above mentioned new direct connections (+62% in indirect connectivity).

Direct connectivity by airport group (2004-2014)



However, most of these developments took place before the **2008/2009 financial crisis**. Since then, small regional airports have actually seen their **direct connectivity falling down by -3.4%** (2014 v. 2008).

Conversely, **large and hub airports have been more resilient**. These airports were less impacted by the financial crisis. However, most of their connectivity gains have come from indirect connectivity (+17.6%) as their direct connectivity increased by only 3%.

Together with the fact that an increasing share of indirect connections from Europe is being routed through Non-EU (Turkey & Russia) and Non-European hubs (Gulf), this reflects the increasing penetration in Europe of Non-EU airlines based at these hubs – and thus the **increasing reliance of Europe on these Non-EU and Non-European hubs for its connectivity**.

Group I	> 25 million passengers per annum
Group II	10 – 25 million passengers per annum
Group III	5 – 10 million passengers per annum
Group IV	< 5 million passengers per annum

The Middle East & African exception

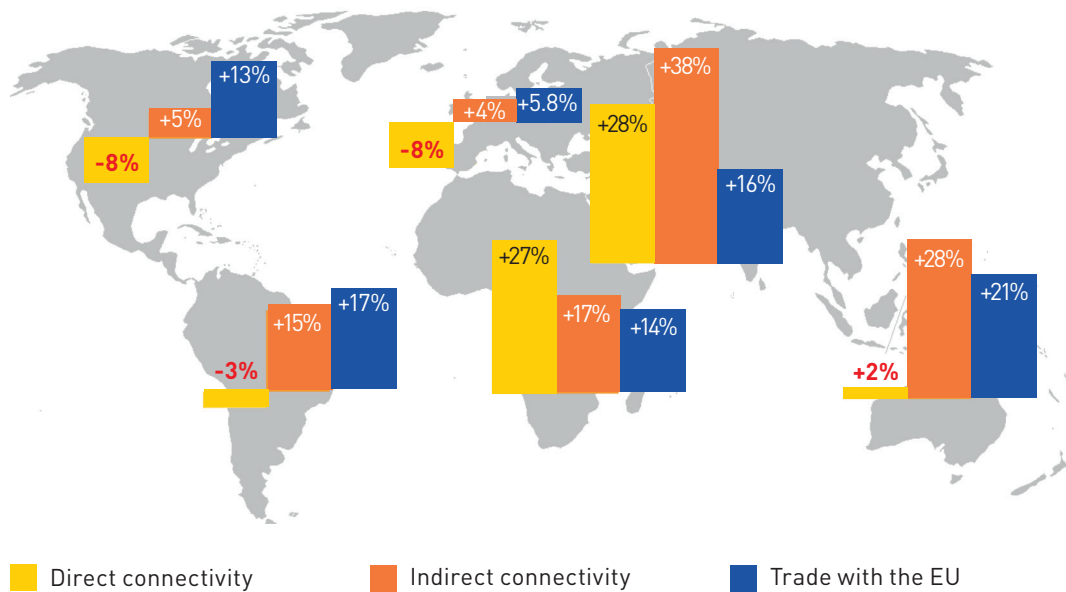
Direct connectivity from EU airports has decreased in particular to **North America (-8.4 %)** and **Latin America (-3%)**, while the increase in direct connectivity to **Asia Pacific (+2.3%)** was marginal. Only the **Middle East (+28%)** and **Africa (+37%)** recorded substantial increases in direct connectivity with the EU since the crisis began.

Underlying economic growth can only explain to a degree the significant increase in EU connectivity to these latter two regions – as their overall growth in trade with the EU, while positive, lagged the equivalent growth in direct connectivity by a considerable margin. Africa and the Middle East share similar characteristics – a low initial base of connectivity with the EU as well as relative

close geographical proximity to the continent. However, the success of connectivity growth with the EU can be attributed to **proactive government strategies** that make the **link between economics growth and aviation policy**, within the Middle East in particular.

Recognising aviation as a strategically important industry for their economies,

■ Total, direct and indirect connectivity by world regions (2008-2014)¹



¹ 2 Trade data sourced from Eurostat as updated on 25 May 2014, and refers to growth in overall EU trade with the respective global regions, as per ACI definition of world regions. Overall trade is considered as the sum of the € value of EU imports & exports to & from each global region. In the case of EU-European trade, the figure represents growth in EU trade with non-EU European countries, combined with the growth in arrivals and dispatches between EU countries.

and exploiting their advantageous global geographic position, the Gulf states have made moves to ensure that they are at the centre of global air networks. The provision of adequate airport capacity for future growth and other supporting measures have been a cornerstone of this strategy. While Africa cannot claim the same approach, in 2006 Morocco reached an open skies agreement with the EU. In that year alone international passenger traffic grew by 25%, and subsequent years have seen an influx of 19 European airlines, including major Low Cost Carrier airlines¹. The national carrier Royal Air Maroc, after a restructuring process, is profitable and with several 787 Dreamliner aircraft soon to be delivered, is looking outwards and to the future².

Between 2006 and 2007 alone, the EU saw an increase in direct connectivity with Africa of over +11%. However in the same year, indirect EU connectivity with Africa grew only by +0.8% as the lack of a coherent and liberalised aviation network within the continent meant that other African countries failed to capitalise on Morocco's opening.

The lesson here is that **while growth in connectivity is linked to wider economic**

forces, it is by no means out of our control.

The experiences of the Middle East and Morocco show that **connectivity increases can be delivered by the right policy decisions**. The experiences of Africa – the only continent where indirect EU connectivity growths lags direct EU connectivity growth – shows that the wrong policies result in the opportunities to transform direct connectivity into wider indirect connectivity being squandered.

With this in mind we must look to other world regions, where impressive increases in EU trade have been recorded since the crisis, above and beyond changes in direct connectivity. Trade with Asia Pacific, for example, has grown by **+21%**, while direct connectivity has grown by only **+2%**. Similarly Latin America has seen trade growth of **+17%**, but has actually recorded a marginal decline in direct connectivity with the EU.

These figures show that there is clearly the **underlying economic potential for much closer air links between the EU and these regions**. Such a development would create new economic links with the EU, and reinforce existing links, but currently, it is a potential which simply is not being realised.

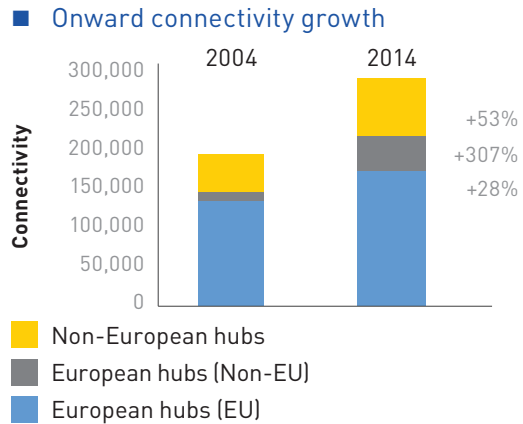
³ *'Open Skies in North Africa: Is Tunisia the Next Morocco?'* Schlumberger, C & Weisskopf, N, World Bank, 2012.

⁴ *'RAM conforte sa métamorphose'* Royal Air Maroc press release, July 2014.

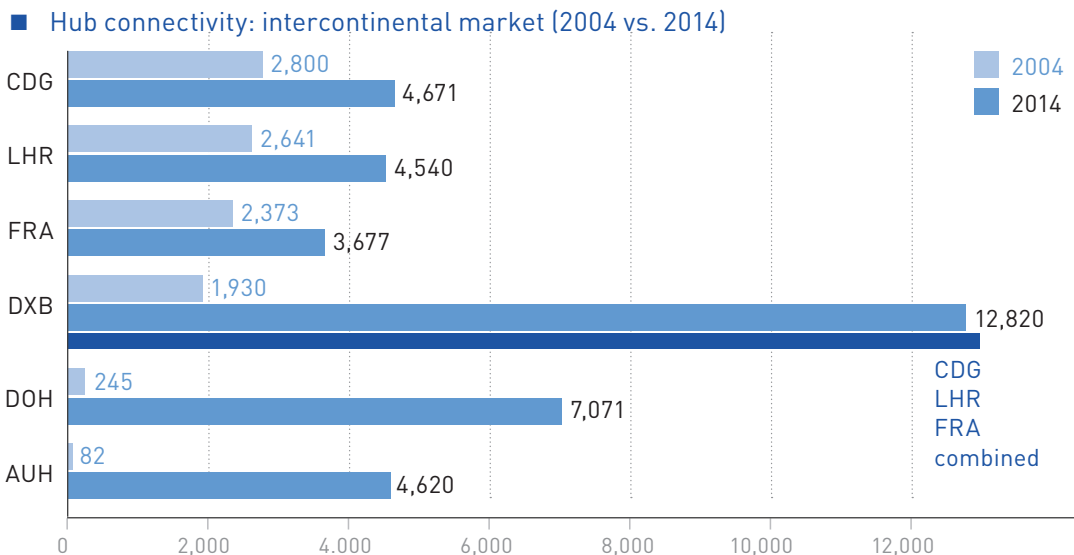
Europe's weakening position as a global aviation hub

Most indirect connections offered from Europe to other World regions are channeled through European hubs (**62%**), the majority of which are located in the EU. However, since 2004, their **market share in onward connectivity from Europe** has decreased by **-10%**, to the benefit of Non-EU and Non-European hubs. This reflects the **very dynamic growth of these Non-EU (+307%) and Non-European hubs (+53%)** in terms of onward connectivity from Europe when compared to EU hubs (**+28%**).

EU hubs are not only seeing their position challenged in the European market. Their **global hub positioning** – as significant providers of intercontinental connectivity between other World regions than their own - **has considerably weakened** due to fierce competition from hubs located in other World regions (in particular in the Middle East).



While back in 2004, the **top 3 EU hubs** (London-Heathrow, Frankfurt and Paris-Charles de Gaulle) had more than three times the level of Global connectivity offered by the **top 3 Gulf hubs** (Dubai, Doha and Abu Dhabi), the situation has nearly reversed with those **Gulf hubs now offering twice the level of intercontinental connectivity offered by the top 3 EU hubs**.



3. KEY EMERGING TRENDS

From this analysis, 3 key trends are emerging for Europe's air connectivity:

1

EU airports have not made any gains in total connectivity since 2011. They have also lost a significant volume of direct connectivity since 2008, becoming more dependent on indirect connectivity for their global outreach.

2

Small regional airports have tended to be more affected than other airports by losses of direct connectivity. Larger and hub airports have shown more resilience – themselves contributing to the overall resilience of the European airport network through their network impact and the indirect connectivity they provide from other European airports.

3

However, EU hubs have been losing market shares to the benefit of Non-EU hubs in Turkey and Russia as well as other Non-European hubs mainly in the Middle East which have become more important for Europe's connectivity. These hubs have grown exponentially compared to EU hubs, acquiring a prominent position in delivering global connectivity between the different regions of the World - with positive spillover impacts in terms of the direct & indirect connectivity they provide to their own local markets and communities.

4. WHAT CAN WE DO?

These key trends indicate that **connectivity cannot be taken for granted**. While market forces and technology are primarily shaping connectivity, **public policies and regulations have also a vital role to play** – especially given the strong correlation between connectivity and economic growth.

The recent loss in direct connectivity (in particular in the Regions), the fact that an increasing share of indirect connectivity is afforded by hubs located outside the EU and the diminished global position of EU hubs should not be ignored. These developments are pointing to the **increasing risk of Europe being by-passed as an aviation hub and a significant player of Global connectivity**. They are also reflective of **less inclusive connectivity across Europe**.

While several prominent newly developed and emerging countries have placed connectivity at the heart of the strategies and policies underpinning their economic development, **the EU still needs to fully come to terms with this issue** – and recognise that air connectivity is an element of its competitive position on the global stage.

Accordingly, **air connectivity should be actively promoted and become one of the pillars of the EU's Growth & Jobs Strategy**.

This should involve an **aligned and supportive policy** addressing a number of key issues that directly shape air connectivity – and which ultimately relate to the competitiveness of European aviation. In particular:

AIRPORT CAPACITY

Europe is facing an airport capacity crunch by 2035 that will see its top 20 European airports fully congested. An integrated EU & national long-term strategic plan addressing this airport capacity crunch is essential. Otherwise, further connectivity losses or sub-optimal connectivity growth is inevitable.

AIR TRAFFIC LIBERALISATION

Opening market access through EU negotiated agreements with the EU's main trading partners should be another priority – given its ability to facilitate and increase air connectivity.

AVIATION TAXES

National aviation taxes should be scrapped as they are detrimental to connectivity – especially for smaller markets.

OPERATING COSTS

Regulation across the Board should be geared towards minimising operating costs for both airlines and airports, as this would have positive spillover effects on connectivity. This is not the case today and requires comprehensive impact assessments. This is especially the case in the fields of aviation security. Security costs should be publicly financed – just as is the case in the US and across most of the rest of the World.

JOIN THE DOTS
&
SET THE COURSE
FOR GROWTH
& JOBS.

CONNECTIVITY
– THE TIME IS NOW.

In 2013, ACI EUROPE partnered with SEO Aviation Economics to produce a unique industry-wide analysis, the *ACI EUROPE Airport Industry Connectivity Report 2004-2014* (Downloadable <http://bit.ly/1u9HUxq>). Released in June 2014, the report is the first of its kind – measuring the direct and indirect connectivity of the European airport network, with analysis based on SEO's NetScan connectivity methodology.

Why Connectivity Matters is intended to be a digest of the report's key findings.

A bespoke service is also available for individual airports. To find out how to request an *ACI EUROPE Customised Connectivity Analysis* for your airport, visit www.airport-connectivity.com

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