AIRPORT INDUSTRY OUTLOOK

Luc Laveyne – Senior Adviser, ACI EUROPE

PRC

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ACI: A GLOBAL CONFEDERATION – 5 regions supported by a Montreal based ACI World office.

MONTREAL

WASHINGTON DC

BRUSSELS

CASABLANCA

PANAMA CITY

HONG KONG

ACI EUROPE MEMBERSHIP

- **228** REGULAR MEMBERS

  - **551** airports operated

  - 50 countries

- **225** WORLD BUSINESS PARTNERS incl. 25 affiliate members

- **10** NATIONAL AIRPORT ASSOCIATIONS

ACI
EUROPE
AIRPORTS COUNCIL
INTERNATIONAL

ACI EUROPE POSITION PAPER

European Airspace: Providing Efficient Connectivity of People, Goods and Regions

September 2020

2nd edition

On the ATM network

✓ The Air Traffic Management (ATM) network serves the primary function of providing <u>efficient air connectivity for people, goods and regions.</u>

✓ The ATM network's goals must be <u>to facilitate on-time</u> arrivals and departures, in order to provide on time & reliable service to consumers as well as <u>predictable</u>, smooth, <u>sustainable</u> emissions-optimal <u>operations</u> for industry and other stakeholders on the ground and in the air.

✓ The ATM network's capacity needs to be matched with comparable capacity on the ground, as part of <u>a holistic strategy for airport and airspace capacity optimization.</u> Any mismatch impacts drastically on the "door-to-door" policy. As such there is an intrinsic link between coordination at airports, in the network, and between airports and the network.
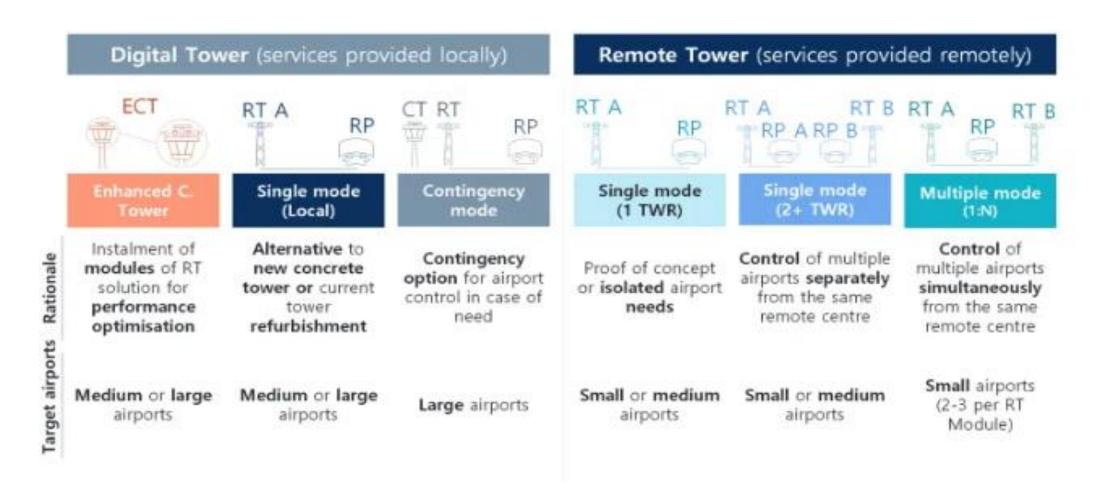
On the ATM network - 2

✓ <u>The ATM network needs to be able to absorb market growth and shifting connectivity patterns</u> by introducing more seamless and collaborative service provision to meet current and future demand in the most sustainable and climate friendly way.

✓ The ATM network is a service to end users. <u>Availability needs to be highly predictable and as uninterrupted as possible.</u> While airport performance influences the performance of the network, network performance directly impacts the performance of airports.

✓ <u>The ATM network needs to be managed in a passenger-centric way.</u> This means that making trade- offs that benefit the passenger should be the norm and trade-offs favouring the system above the passenger should be the exception.

Remote ATC at London City Airport – You tube

https://www.youtube.com/watch?v=MsoxL6tMG_I&ab_channel=LondonCityAirport

Remote ATC – many meanings – one baseline

Disruptive technology with proven potential to decouple service provision from the fysical tower infrstracture at an airport

Digital Tower (services provided locally)			Remote Tower (services provided remotely)		
Enhanced C. Tower	**Single mode (Local)**	**Contingency mode**	**Single mode (1 TWR)**	**Single mode (2+ TWR)**	**Multiple mode (1:N)**
Instalment of **modules** of RT solution for **performance optimisation**	**Alternative** to **new concrete tower or** current tower **refurbishment**	**Contingency option** for airport control in case of need	Proof of concept or **isolated** airport needs	**Control** of multiple airports **separately** from the same remote centre	**Control** of multiple airports **simultaneously** from the same remote centre
Medium or **large** airports	**Medium** or **large** airports	**Large** airports	**Small** or **medium** airports	**Small** or **medium** airports	**Small** airports (2-3 per RT Module)

Benefits of remote ATC

1. Safety up → better capabilities to detect risky situations → better visualization.
2. Cost efficiency up.
   1. Cost of building is considerably lower.
   2. Economies of scale possible in multi airports environment. (roster optimization).
3. Delinking the control center location from that of the aerodrome allows for more convenient sites to be chosen (access, land cost)
4. Scalability.
   1. Remote towers allow for ATS provision to **grow in capacity based on traffic demand**, given that additional Remote equipement can be installed when needed.
   2. In contrast to conventional control towers, which are naturally bounded by their physical dimensions, thus being inevitably oversized during the first years of operations, and having limited growth possibilities afterwards.
5. Better protection against cyber security → cutting-edge technology.

Potential as flagship

- Can be applied at all types of airports.
- Scalable roll out :

  - Whenever a conventional tower needs to be **renewed or refurbished, at large CAPEX cost, remote ATC can be an alternative**
  - At airports that have **low traffic volumes,** or exhibit traffic volatility or **heightened seasonality**
  - Whenever **adverse climatic or environmental conditions** have an impact on operations, that can be curbed with the additional visualisation capabilities that remote towers do not have
  - At airports located are in **remote regions,** limiting access to qualified personnel or even hindering the service continuity of conventional towers cf. above
  - In **multi-airport contexts** when direct coordination among nearby airports becomes possible.