

Our sky could fall:

The long-term infrastructure and funding challenge facing RDU Airport – and our region

Preliminary task force findings and recommendations

Regional Transportation Alliance
RDU Airport Infrastructure Development (AID) Task Force
January 17, 2020

RTA is the voice of the regional business community on transportation

Executive Summary / Letter to the Region

Thank you for your support of RDU International Airport – and of our region’s future success.

There is a broad understanding and appreciation for RDU Airport across our region. We are rightly proud of the beautiful facilities, ease of use, and the friendly environment. We enjoy access to a rich array of flights and destinations and an enviable, balanced mix of air carriers. The global connectivity RDU provides as America’s most-connected non-hub airport is a crucial part of our region’s economic success. RDU Airport is the first impression that many of our visitors have of our community – and RDU also serves a source of vital tax revenue due to the impact from jobs and tourism.

However, this growth in flights, destinations, and passengers has created—and potentially masked—an urgent need to expand infrastructure and an equally urgent funding problem for RDU.

In 2017, the Federal Aviation Administration (FAA) approved RDU’s infrastructure development master plan, titled “Vision 2040”, which provides airport leadership with a logical, scalable road map to respond to the impact of regional growth on RDU over time. However, **passenger levels in 2019 were the highest in RDU history. They are equivalent to the projected 2031 levels – meaning that traffic at RDU is 12 years ahead of expectations and continuing to increase.** To maintain the current levels of service and account for anticipated and accelerated capital needs, our community will need to invest between \$3 and \$4 billion in RDU airport infrastructure over the next two decades.

The funding for this expansion should be a shared responsibility. RDU’s owners – Wake and Durham Counties, and the cities of Durham and Raleigh – currently contribute a total of \$50,000 a year to the operations and capital program. The North Carolina General Assembly has been a great partner for RDU—and all of the state’s commercial airports—by providing a recurring funding source for capital needs. But the principal responsibility for identifying a sustainable financial model falls on the RDU Authority and the airport’s visionary leadership team, which executes a world class airport experience for travelers every day, through a host of visible and behind-the-scenes efforts.

While the airport will have significant and increasing revenue sources available as a result of more flights and passengers, state assistance, and RDU initiatives, our region will still face a funding gap for RDU between \$1 and \$2 billion over the next two decades. The size will depend on how quickly our region grows and how much disruption our community can tolerate in waiting for new facilities, waiting in lines, delayed flights, along with fewer flights due to lack of terminal or airfield space.

RDU is not alone in dealing with the challenges of rapid growth. Many of the regions against which we compete and benchmark ourselves—such as Nashville, Austin and Columbus—are making or seeking substantial investments in airport expansions to handle and stimulate future growth.

The continual upgrading and expansion of RDU is critical to the ongoing economic prosperity of the Triangle region. From business expansion, to tourism, to our global reputation as center of research, innovation, education and health care, the airport is essential. To date, improvements to the airport have been completed with little to no negative impact to travelers even though they touch critical aspects of the operations such as runways, taxiways, security lines and roadways. Future improvements will become increasingly challenging given the growth of the region, the limitations of existing infrastructure, and the size of the funding gap.

Given its long-term funding situation, and in response to a request from RDU, the Regional Transportation Alliance convened a diverse group of 12 business and community leaders to develop potential solutions, known as the RTA RDU Airport Infrastructure Development (AID) Task Force.

Our task force met monthly since September 2019. We heard from key leaders and partners including members of the RDU Airport Authority Board and several of the air carriers serving RDU. We also engaged Ricondo & Associates, the firm that developed RDU's master plan, to offer insights on changes at RDU since adoption of the airport master plan as well as potential consequences of inaction.

Our work made it clear that RDU's master plan cannot fund itself, particularly given the rapid growth in the region. Neither the legislature's investments nor the additional revenue from new flights will be sufficient to fully close the \$1 to \$2 billion funding shortfall. There is also no current consensus with RDU's airline partners on funding solutions or structures. And, while the airport may not be a natural partner with Umstead State Park, it needs to quickly become one, and vice versa.

It is also clear that the public has very little awareness of the accelerated rate of growth at RDU, the level of needed infrastructure over the next 10 to 20 years, the financial underpinnings of the airport, the extent of the funding challenge that has emerged, and the lack of an obvious solution to quickly address what could become a crisis for the region.

* * * * *

This report offers a series of preliminary findings, observations, and recommendations for funding.

These are not intended to be the final answer to RDU's funding dilemma; rather, we advance them to highlight the issue and the extent of the problem, and to accelerate what will be necessary conversations by policymakers, the business community, and the public on possible solutions.

We believe that our region, and the business community as a whole, must become more broadly aware of the challenges facing RDU. Our community, led by the four owners of RDU and the RDU Airport Authority Board, must identify and activate a funding structure that sets RDU on a financial trajectory needed for long-term success for our region.

There is no single "magic" answer, and we have a limited and shrinking period of time for all stakeholders—including, but not limited to, the four governmental owners, the airlines serving RDU, and business and leisure air travelers—to come up with a way to ensure the long term viability of RDU. We also believe that RDU should do a review of its master plan, given our rate of growth, RDU's funding needs, and the current political environment.

We also believe that the regional business community can be a catalyst for broader, collective action to ensure the ongoing success of RDU for our region.

Identifying sustainable funding for essential growth at RDU airport is the top transportation priority of the regional business community, and it will remain so until it is successfully resolved.

Michael Schoenfeld
Duke University
On behalf of the RTA RDU AID Task Force

Joe Milazzo II, PE
Executive Director
Regional Transportation Alliance

Context for readers

The information in this “Our sky could fall” findings and recommendations document represents the best thinking of our RTA volunteer business task force as of mid-January 2020.

The Regional Transportation Alliance has not formally approved these findings or recommendations and so they should be considered preliminary. However, RTA supports their release at our annual meeting on January 17, 2020 to generate discussion and increase awareness of the issue across the region.

The task force was purposeful in seeking to advance a resolution of the funding issue by proposing a series of options while avoiding an excessive burden on any one group of stakeholders. *When seeking to resolve a multibillion dollar infrastructure funding gap, there is inevitably going to be something for everyone to like or dislike.*

Therefore, we suggest that readers treat this task force document as a whole, as a preliminary recommended *package of potential options* for the region to consider, evaluate, and improve upon.

While we believe this document represents an important contribution to and elevation of the regional conversation, we recognize the limitations of time and resources available for our volunteer task force. This document is not intended to be either “perfect” or exhaustive, and we do not have revenue estimates for several of the preliminary recommendations described herein.

Please notify us of errors, mistakes, and missing information.

Acknowledgements

The Regional Transportation Alliance RDU Airport Infrastructure Development (AID) task force would like to thank several organizations for their assistance with this ongoing RTA initiative, including:

- RDU professional staff, led by president and CEO Michael Landguth
- RDU Airport Authority Board of Directors, led by chairman John Kane
- Airlines for America
- Delta Air Lines
- American Airlines
- Southwest Airlines
- Ricondo & Associates
- RTA member firms

Note that our acknowledging of the above individuals or entities does not imply their agreement with all or any of the preliminary findings or recommendations in this report.

The Regional Transportation Alliance RDU Airport Infrastructure Development (AID) task force has been honored to serve the regional business community and the broader region in this effort, and we look forward to working together to ensure the continued success of RDU.

Brief summary of preliminary task force findings, observations, and recommendations

Overall Recommendation:

Expediently identify, approve, and activate a sustainable funding structure to address the \$1-\$2 billion funding gap at RDU over the next two decades to ensure the long-term success of RDU and the region.

Annual economic impact of RDU

- RDU's annual economic impacts exceed \$12 billion and nearly 100,000 jobs
- State, local tax revenues exceed \$400 million annually due to activity supported by RDU Airport

Accelerated growth at RDU

- Passenger levels in 2019 were the highest in RDU history and are equivalent to the projected 2031 levels – meaning 12 years ahead of expectations and continuing to increase.
- Peak hour usage of terminal 2 security lanes are up 50% in 2 years

Projected capital needs and funding gap

- Our region faces a funding gap for RDU between \$1 and \$2 billion over the next two decades, the size of which depends on how quickly we grow and how much disruption we can tolerate
- Capacity constraints will result in longer wait times and may impact flights and economic activity
- Airport infrastructure cannot be activated like a light switch; it can have decade-long lead times
- The public has little awareness of the rate of growth at RDU, the level of needed infrastructure, and the lack of an obvious solution to address what could quickly become a regional crisis

Current sources of funding

- State of NC has been a strong partner for RDU and other commercial service airports
- Federal Government will not provide significant financial help to RDU and peer airports
- Airlines oppose increases in the maximum passenger facility charge (\$4.50 PFC since 2000)
- RDU has sufficient funding available for this decade's needs, and then faces a major challenge

Selected preliminary task force recommendations on funding and financing

- Increase carrier landing fees and activate general aviation landing fees
- Implement \$2 airport access fee, collected via transponders; use funds for RDU roadway needs
- Reallocate local rental car taxes to airport; use funds for RDU roadways and rental car facility
- Implement premium curb access areas at terminals; use funds for RDU terminal improvements
- Propose nominal PFC increase of \$1, and index for inflation, but do not focus on large increase
- Lobby FAA for accelerated environmental approvals; e.g., establish maximum 3 year timeframes
- Accelerate or increase amount of bond financing, if allowed by other covenants and supported by additional revenues such as those identified above

Selected preliminary task force observations and recommendations on land use

- Create RDU Real Estate Master Plan with specific timelines, financial requirements
- Hire master developer to review entire airport for strategic development opportunities
- Consider creation of a new "terminal 3" – north of terminal 2, away from Umstead State Park
- Offer airlines opportunity to build, fund, and operate terminal 3 – and share in capacity risk
- RDU could do a value engineering review of entire 2040 master plan to build regional goodwill
- RDU should revisit entire 2040 master plan given the reality of an adjacent, beloved state park

Identifying sustainable funding for essential growth at RDU airport is RTA's top priority for 2020.

Preliminary Findings and Observations by RTA RDU AID Task Force

Findings and Observations on RDU, Master Plan, Growth and Airport Infrastructure Development

- The RDU “Vision 2040” master plan makes logical sense and is scalable
- However, RDU’s growth has swamped many of the master plan’s inherent assumptions
- 2019 actual passengers equal projected 2031 levels – meaning 12 years ahead of expectations
- As a result, RDU capital development needs are 12 years behind, and falling further behind
- 14 million actual passengers at RDU in 2019, a 50% increase in 6 years
- Peak hour usage of terminal 2 security lanes are up 50% in 2 years
- Our region is anticipated to grow by another 30-40% or more in the next two decades
- RDU is executing remarkable, behind-the-scenes efforts, e.g. overnight runway preservation
- Most improvements to-date have been completed with little to no negative impact to travelers
- Future upgrades will become increasingly challenging to implement without traveler impacts
- *Projected infrastructure needs at RDU over the next two decades are \$3 to \$4 billion*

Findings and Observations on Economic Impact

- RDU’s annual economic impacts exceed \$12 billion and nearly 100,000 jobs
- One new international flight (Paris) has a projected \$1.4 billion economic impact, 14,000 jobs
- State, local tax revenues exceed \$400 million annually due to activity supported by RDU Airport
- RDU is an essential component to our recruitment and economic development efforts
- Affordable, convenient, competitive air travel options are necessary for businesses to compete
- Convenient air travel options are an important factor for talent retention, employee attraction
- We have a strong array of flights and destinations at RDU with an enviable, balanced carrier mix
- RDU benefits not only the local economy but surrounding areas as well
- Capacity constraints will result in longer wait times and may impact flights and economic activity
- Runway/gate expansions will create opportunities for more nonstop flights, international service
- Doing nothing will have significant economic development and personal quality-of-life impacts
- *Doing nothing is not a viable option for a growing community to remain successful*

Findings and Observations on Funding and Funding Gaps

- Airport infrastructure cannot be activated like a light switch; it can have decade-long lead times
- RDU is not alone in dealing with the challenges of rapid growth
- RDU professional staff is actively exploring and implementing revenue and expense solutions
- RDU’s four owners (Durham, Wake cos.; Raleigh, Durham city) collectively invest \$50k per year
- State of NC has been a strong funding partner for RDU and other commercial service airports
- RDU will receive more than \$17 million in recurring annual funds from the State
- Federal Government will not provide significant financial help to RDU and peer airports
- RDU’s average annual federal entitlement and discretionary funds are around \$2.5 million
- All major stakeholders (e.g., federal, state, local, airlines) will need to participate in the solution
- RDU believes it can cover \$2 billion in capital needs through 2029 via cash and maxing out bonds
- Additional bond financing will require sufficient operating revenues to support new debt
- RDU’s master plan cannot fund itself, even with—and especially with—our accelerated growth
- RDU’s moving to full cost recovery for aviation-related expenses instead of discounts to airlines
- Raising airline rates and charges has limits for RDU to remain competitive vis-à-vis other markets
- RDU’s projected funding gap will still be \$1 to \$2 billion over next 15-20 years
- *RDU is so good, it’s a problem; the effectiveness and growth at RDU means that there is little to no awareness of the looming funding issue – and of the potential impact to our prosperity*

Findings and Observations on Airline Partners and their relationship with RDU

- Airlines have been great partners for RDU travelers, adding more flights, seats, destinations
- Airline, airport, and community interests are understandably not always in complete alignment
- There is not currently agreement with airlines on means of funding required infrastructure
- Airlines want RDU to keep their costs per enplanement (CPE) low or at least competitive
- RDU recognizes that costs may track upwards to maintain a viable capital program
- Airlines oppose increases to federally authorized passenger facility charge (PFC)
- Maximum allowable PFC levels (\$4.50) have been unchanged by Congress since 2000
- RDU is at maximum PFC level; proceeds are dedicated to terminal 2 repayment for many years
- Airlines want more certainty in their rates and charges; RDU desires to retain flexibility
- Airlines generally want more input in capital expenditures at all airports they serve
- *RDU should ensure ongoing and future competition, not just funding the needs of current airlines*

Brief comparative data with selected peer airports

	Austin	Columbus	Nashville	San Jose	RDU
Enplanements/year	7.7 m	4.0 m	8.0 m	7.0 m	6.3 m
Flight operations/year	208k	155k	210k	166k	209k
10 yr capital program	\$4.3b	\$2.0b	\$2.9b	\$0.3b*	\$1.9b
Debt/enplanement	\$102	\$20	\$34	\$178	\$74
Cost/enplaned pax	\$9.03	\$7.92	\$7.00	\$10.39	\$7.50
Non-aero rev/gate	\$2.9m	\$1.9m	\$2.0m	\$3.0m	\$1.9m
Days cash on hand	573	430	700	635	1135

*Note: enplanements and operations are 2018 data; RDU had 7.1m enplanements in 2019, *San Jose capital program is for 5 years only.*

Courtesy: Airlines for America (A4A), Raleigh-Durham Airport Authority (RDUAA), Ricondo & Associates, Federal Aviation Administration (FAA).

Information on FAA national airport categories

There were 30 large hub airports in 2018 in U.S.

1-Atlanta (51.9m enplanements) to 30-Portland (9.8m), average 21.4m

There were 31 medium hub airports in 2018 in U.S., including RDU

31-Nashville (8.0m enplanements) to 61-Omaha (2.5m), average 4.8m

RDU was ranked 39th (6.3m enplanements) in 2018

If RDU's 2019 data applied to 2018, it would have been the 35th largest airport in U.S.

Source: FAA

Selected overview data for RDU Airport

RDU vital statistics

- 61 total nonstop destinations, including 5 international
- 10 airlines
- More than 600 daily take-offs and landings
- More than 35,000 daily passengers

RTA growth measures

- Around 50% increase in passenger traffic since 2013
- Around 150% increase in international traffic since 2014

Examples of recent and ongoing reconstruction and upgrade work at RDU

- Terminal 2 checkpoint: from 10 to 12 lanes in 2019, to 14 lanes in 2020
- Reconstruction of 5L-23R continues, with 117 slabs replaced overnight in 2019
- Repairs to 5R-23L occurred in 2019
- *Most improvements to-date have occurred with little to no impacts to travelers*

Selected summary of findings from Ricondo & Associates on RDU changes since master plan

RTA hired Ricondo & Associates, a Chicago-based engineering consulting firm that had developed the RDU Master Plan, to compile updated information on the potential consequences of inaction. While this was not a redo of the master plan, it did provide new information and perspectives given our rate of growth.

Average aircraft size at RDU is getting larger:

- 2015: 104 seats/departure
- 2019: 120 seats/departure
- 2025: 140 seats/departure

Which means aggregate wing span is getting larger, which is creating gate limitations

Peak periods at RDU are becoming more pronounced and broader (more sustained).

While RDU is still a predominantly an Origin & Destination (O&D) Airport, **RDU is now serving more reliever-type connections.**

Potential technology solutions for security screening lane capacity offer limited and variable capacity benefit and even some of these require additional physical space.

Source: Ricondo & Associates, study for RTA, January 2020

Summary of Preliminary Recommendations of RTA RDU AID Task Force

RDU and Local Funding Recommendations

- Continue to pursue full cost recovery of all aviation-related expenditures at RDU
- Increase existing carrier landing fees based on weight; use funds for airfield improvements
- Activate landing fees for general aviation users; use funds for airfield improvements
- Implement \$2 fee payable upon exiting the airport; use funds for RDU roadway improvements; *parking customers would not pay this fee; would be collected via transponders; revenue TBD*
- Reallocate local rental car taxes to RDU; use funds for RDU roadways and rental car facility *All local rental car taxes currently raise \$16m per year, or around \$160m per decade*
- Implement premium curbside access fees at terminals; use funds for RDU terminal improvements *this would be a premium, opt-in offering; would be collected via transponders; revenue TBD*
- Have Durham and Wake counties identify external lands that could be monetized to fund RDU
- Consider accelerating or increasing amount of bond financing, if allowed by other bond covenants and supported by additional revenues such as those identified above
- *RDU's local owners must develop or endorse sustainable funding package and own this issue*

Airport Land Use Recommendations

- RDU property is a valuable resource that should be managed to generate revenue for the airport
- RDU has the responsibility to leverage its property for compatible and complementary uses *Create RDU Real Estate Master Plan with specific timelines, financial requirements; Hire master developer to review entire airport for strategic development opportunities*
- Consider creation of a new "terminal 3" – north of terminal 2, away from Umstead State Park *Terminal 3 could be primarily focused on expanded international service offerings; Offer airlines opportunity to build, fund, and operate terminal 3 – and share in capacity risk*
- RDU could consider relocating crosswind (14-32) runway; evaluate compatible uses of that land
- RDU could do a value engineering review of entire 2040 master plan to build regional goodwill
- The situation surrounding RDU's lands and adjacent Umstead Park has been a costly distraction *RDU should revisit entire 2040 master plan given the reality of an adjacent, beloved state park*
- RDU may not be a natural partner with Umstead, but it needs to become one – and vice versa *Ask NC DNCR to authorize mountain biking in Umstead State Park at an appropriate location*

State Funding Recommendations

- Thank legislature for significant, ongoing investment in North Carolina's commercial airports *State funding generates around \$17m annually for RDU, or around \$170m per decade*

Federal Funding and Policy Recommendations

- Propose nominal PFC increase of \$1 (to \$5.50); then index PFCs to inflation going forward *A \$1 PFC increase would provide \$6m annually for RDU, or around \$60m per decade*
- Rather than uncapping PFCs, authorize increases above these levels only with airline approval(s)
- *Do not focus on large PFC increases, as the conflict between airports and airlines appears to be unresolvable and a distraction from needed federal action on areas like FAA approval timelines*
- Lobby for accelerated FAA environmental approvals (max 3 years) via airports/airlines coalition

Overall Recommendation:

Expediently identify, approve, and activate a sustainable funding structure to address the \$1-\$2 billion funding gap at RDU over the next two decades to ensure the long-term success of RDU and the region.

Regional Transportation Alliance RDU Airport Infrastructure Development (AID) Task Force

Task force members

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