EMBRAER

FRESH PERSPECTIVES ON
AIRLINE FLEET STRATEGIES

THE NEW METRICS OF SUCCESS

THE NEW METRICS OF SUCCESS

FRESH PERSPECTIVES ON AIRLINE FLEET STRATEGIES

Another in a continuing series of Embraer communiqués dedicated to helping airlines confront and overcome the challenges of our industry.

“INVESTORS HAVE POURED THEIR MONEY INTO AIRLINES FOR 100 YEARS WITH TERRIBLE RESULTS.”

WARREN BUFFETT, REMARKS AT 2013 BERKSHIRE HATHAWAY ANNUAL MEETING

FOREWORD

It’s true: investing in airlines has commonly resulted in disappointment for shareholders — at least partly because of challenges inherent to the business. Consider, for example, the fact that an airline seat is among the world’s most perishable goods. Once that aircraft door is closed, all empty seats accumulate as waste. As anyone in the industry knows, seats are so perishable that some airlines are forced to sell them at a very low cost to avoid their being flown empty. Consequently, their revenue potential is diminished even before the cabin door is closed.

In the last few decades, the industry has evolved dramatically. Regulation has changed. More efficient aircraft have been introduced. And as capacity has increased, unit costs have been reduced — along with unit revenues and unit profits. All of which raises the question: how can the airline industry provide better returns for investors? We believe such financial success is already emerging from a well-executed business strategy.

Successful airlines are increasingly focused on the quality of revenue to boost results. From our global perspective, it is clear that the 70 to 130 seat segment can help bring sustainable profitability to the industry.

THE RULE IS GOLDEN

A LITTLE OVER A DECADE AGO the first E-Jet took to the skies, marking the dawn of a new era. And as our family of four made its worldwide debut, we published "The Rule of 70 to 110" — a rationale for a lower seat count that would help carriers rightsize their capacity to match demand. By tapping this perceived gap in equipment capacity, airlines could manage revenues with greater precision and achieve higher profits. Now, with over 1,000 E-Jets delivered and serving every continent, it is clear the rationale was right. Following the "The Rule" has resulted in greater convenience to passengers — more flights, better connections. And greater efficiency for airlines.

A second generation of E-Jets redefines our segment as 70 to 130 seats. But even though the essence of our original vision endures, the dynamics of our industry have evolved significantly in the intervening years. A key example is the now-common focus of airlines on lower unit costs as a strategic advantage in the aggressive pursuit of market share. In the pages that follow, we explore the premise that unit profit and return to shareholders are better measures of success. Our vision is that airlines will continue to use common measures — unit cost, load factor, market share — but will introduce new ones as investors demand a better return for their capital in a sustainable fashion.

Indeed, one such new metric is the core insight of this publication. Specifically, it is this: Return on Aircraft Assets (ROaA), as distinguished from conventional ROA, will be an increasingly important indicator for aircraft evaluation.

We invite you to examine with us this emerging trend toward fleet decisions driven by return to shareholders.

70 TO 130

PART ONE

1

REDEFINING SUCCESS

FROM MARKET SHARE TO SHAREHOLDER RETURNS

COST PER SEAT EXALTED

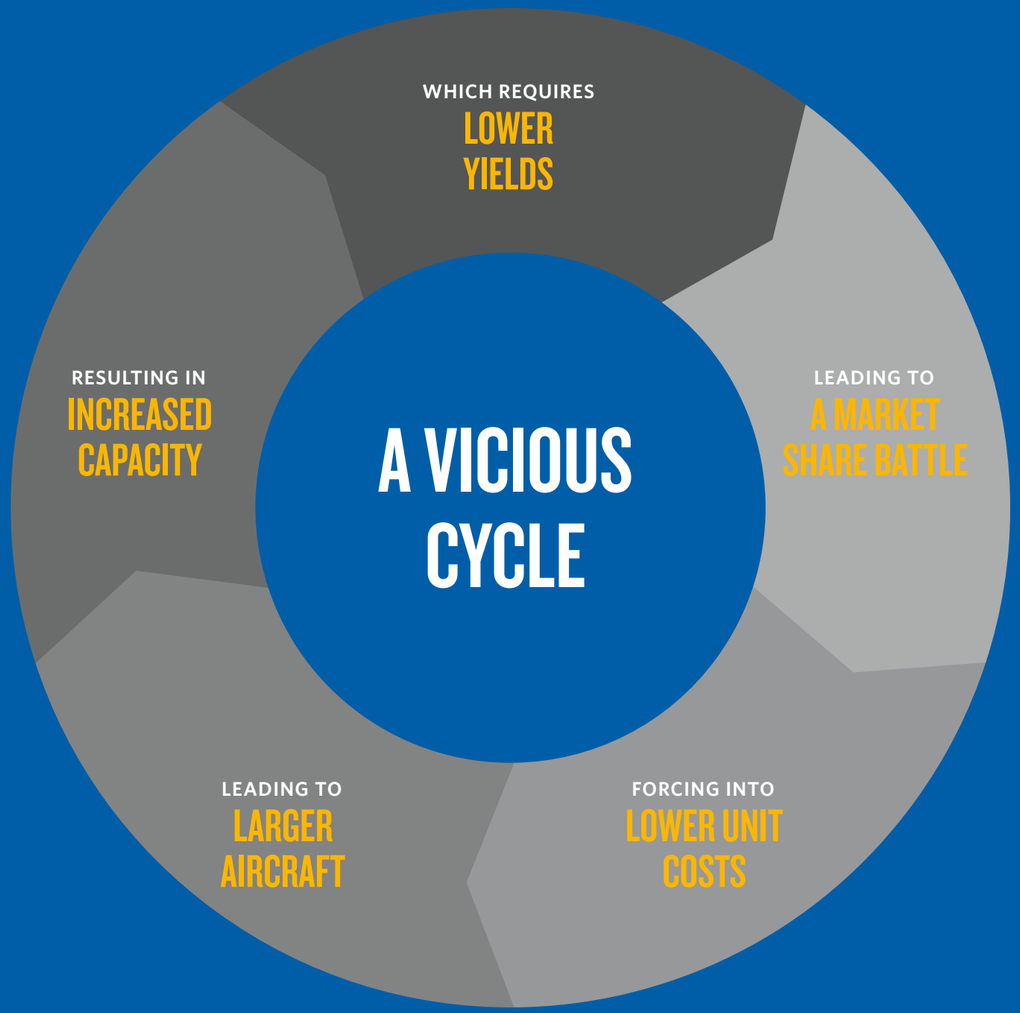
DURING THE YEARS SINCE E-JETS WERE INTRODUCED into service, new entrants to the airline marketplace shook the competitive landscape with a low-fare proposition that made air travel more accessible to the masses. In response to this new environment, many airlines focused on lower unit costs as a strategic goal, and this measure of cost per seat has become the main metric of their business. Those carriers exalting cost per seat as their fundamental guiding metric have found themselves chasing the same business, with the same type of equipment, and with strategies and value propositions that allow for no clear differentiation.

The result has been a partial commoditization of air travel as the industry assumed the classic attributes of a red ocean. Airlines unable to escape the cost per seat mantra have been left with no choice other than to reduce unit cost, in order to accommodate lower unit revenue, and then see their earnings erode.

THE EMPOWERED PASSENGER

IN PARALLEL, dramatic changes in technology brought new levels of transparency that also changed consumer behavior. This transformation marked the emergence of empowered passengers who are more knowledgeable and more demanding than ever in their pursuit of value. With the advent of online search engines, access to fare and seat availability has uncloaked the complexity of ticket-price categories. As the price of each component of product bundling became apparent, the lowest fares were exposed, which added to the reduced differentiation between airlines and further commoditized air travel. Consumers can compare products, read reviews and better judge value propositions offered to them — paying for the products and services they value most. Consequently, consumer bargaining power is greater than ever before.

LOW LEVELS OF DIFFERENTIATION YIELD LOW-LEVEL RETURNS.



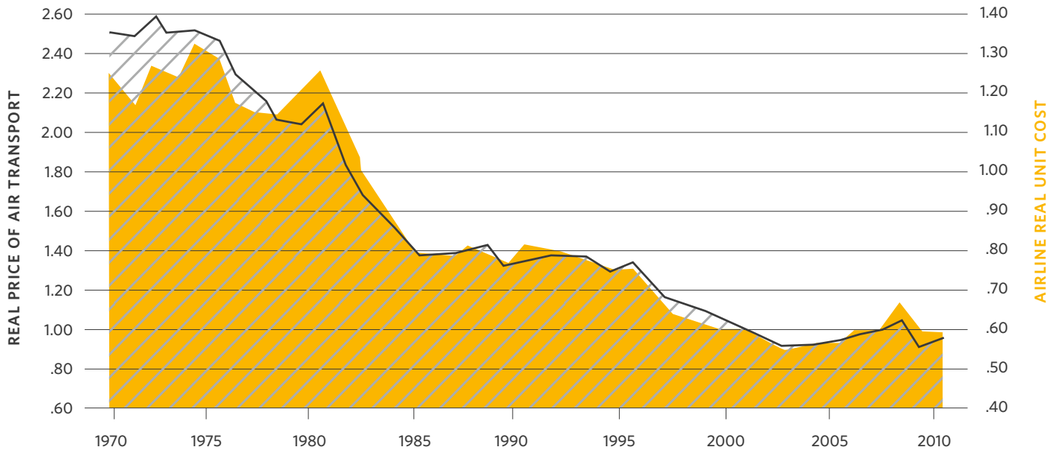
DYNAMICS OF A VICIOUS CYCLE

THE ACCOMPANYING CHART comparing unit cost and unit revenue tells the story clearly; the two measures are very well correlated. As markets were deregulated and liberalized, competition increased and gains the industry made by reducing unit costs were given away. Passengers were pleased. Investors, not so much.

Some airlines in search of the lowest unit cost increased capacity and additional seats, which had to be sold at a lower price. As competition followed suit, market share battles began, which added more pressure to reduce unit costs, increase capacity, and therefore to lower prices even further. Lower costs brought lower revenues and not necessarily higher earnings.

It is natural to lower costs in order to stay competitive — and sometimes even to survive. But that can lead to a vicious cycle. Ever-lower fares induce ever-lower costs. At what point do you stop? Is the marginal cost of flying an additional seat covered by the lower fare it generates? What if the additional seats remain empty? What if that surplus capacity can't be sold at a profit?

UNIT COST AND UNIT REVENUE CORRELATION
Source: ICAO, IATA



ANCILLARY HAS ITS LIMITS

ONE OF THE MOST SIGNIFICANT CHANGES in airline pricing over the last decade has been the unbundling of services that once were included in the ticket price. The sale of ancillary products and services not only can boost airline profits but also provide more value to passengers as they are able to pay only for what they want. In some cases, ancillary revenues can mean the difference between profit and loss.

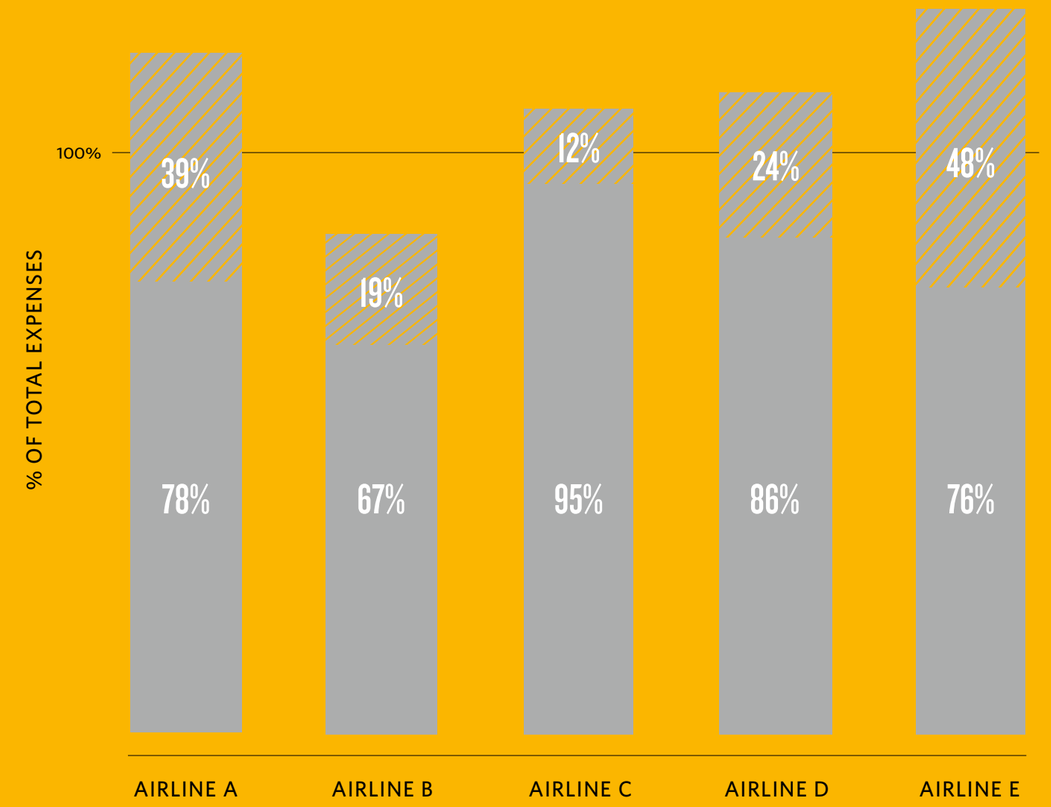
We believe that any business should explore all possible sources of revenue, provided that they do generate shareholder value. Some airlines have thought that with the lowest cost per seat and ticket price, ancillary revenues alone would be sufficient to achieve the airline's target results. That hasn't worked in all cases for too long.

As an airline grows and matures, costs increase. When revenue growth is outpaced by cost growth, the boost from ancillary revenues might not be enough. Revenue model strategies will seek maximum total revenue per passenger by maximizing average fares and ancillary revenues.

WHY NOT SEEK THE BEST IN ANCILLARY REVENUES AND PRESERVE YIELDS **AT THE SAME TIME?**

IN MANY CASES, TICKET REVENUE ALONE IS NOT SUFFICIENT TO COVER OPERATING COSTS.

REPRESENTATIVE AIRLINE REVENUE MODELS
Source: Airline Financial Reports



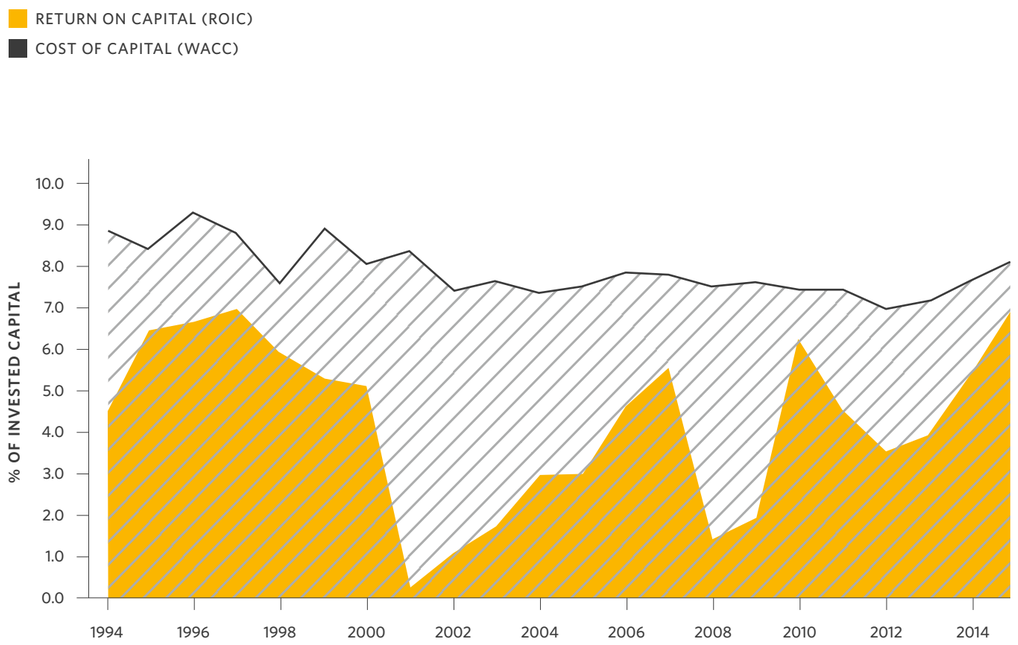
RISK DEMANDS REWARD

WITH FEW EXCEPTIONS, airline equity owners are not rewarded adequately. Such are the intensity of competition, and the challenges of doing business, that average airline returns are seldom higher than the industry's cost of capital. Some equity investors could be seeing their capital shrink. The current trend of improvement in returns is being driven by fundamental changes in management behavior rather than by desperate cost-cutting.

Adjusting load factors to a given aircraft size by simply reducing fares might not result in a sustainable business model. Engaging in fare wars leads to poor asset performance, whereas high asset performance is key to sustainable profits. When you fly an airplane optimally sized to the market, the Return on Aircraft Assets (ROaA) can be impressive. It is simple math, but from a slightly different perspective.

We believe that Return on Aircraft Assets is a meaningful framework for making fleet decisions. In the pages ahead, we examine the math behind the metrics.

RETURN ON CAPITAL INVESTED IN AIRLINES
Source: IATA, McKinsey & Company



PART TWO

MEASURING PERFORMANCE

TRUTHS REVEALED IN NUMBERS

A TALE OF TWO SEATS

COMPETITIVE FORCES NOTWITHSTANDING, aircraft with fewer seats generally command higher average yield. A market-share-driven strategy would welcome additional passengers attracted by price incentives, yet overall yield would be diluted since excess capacity would be allocated to the lowest fares. The accompanying diagram shows the effect in a simple example of revenue optimization in which the additional seats on the larger jet are allocated to the lowest-fare booking class.

For a typical array of average leg values per booking class, the right-sized aircraft would have fewer seats assigned to low-yield passengers, thereby maximizing revenue per available seat. Although the larger aircraft has higher overall revenue, the disproportionate number of lowest-fare seats sold reduces the unit revenue. Strategies focused on attracting the additional low-fare passengers must embrace lower returns to gain market share.

Improving loads is easy, but improving loads along with profitability is more complicated. The challenge is to increase load factors without simply reducing fares. Airlines flying lower-capacity aircraft are able to maximize revenue per seat and load factors.

REVENUE OPTIMIZATION — SIMPLIFIED EXAMPLE

110-SEAT JET

CLASS	FARE	SEATS	AVG PAX	REVENUE
Y	$230	11	12	$2,760
B	$150	18	18	$2,700
M	$120	32	29	$3,480
Q	$90	49	46	$4,140
TOTAL	-	110	105	$13,080

170-SEAT JET

CLASS	FARE	SEATS	AVG PAX	REVENUE
Y	$230	11	13	$2,990
B	$150	18	19	$2,850
M	$120	32	32	$3,840
Q	$90	109	65	$5,850
TOTAL	-	170	129	$15,530

Typical 600 nm sector, North American environment

110-SEAT JET
REVENUE PER SEAT = $119

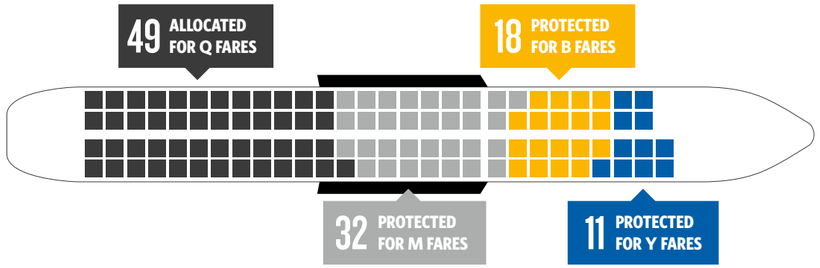
+30%

170-SEAT JET
REVENUE PER SEAT = $91

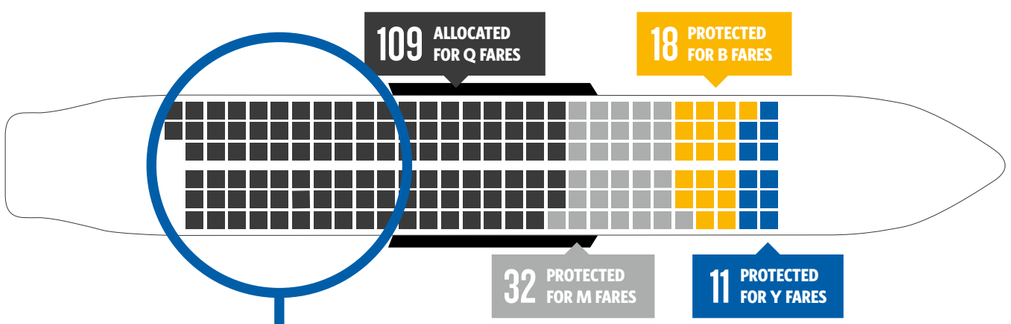
AIRCRAFT WITH FEWER SEATS COMMAND HIGHER REVENUE PER SEAT.

SEAT ALLOCATION COMPARISON

110–SEAT JET



170–SEAT JET



FILLING EXTRA LOW-FARE SEATS REQUIRES EMBRACING

LOWER RETURNS

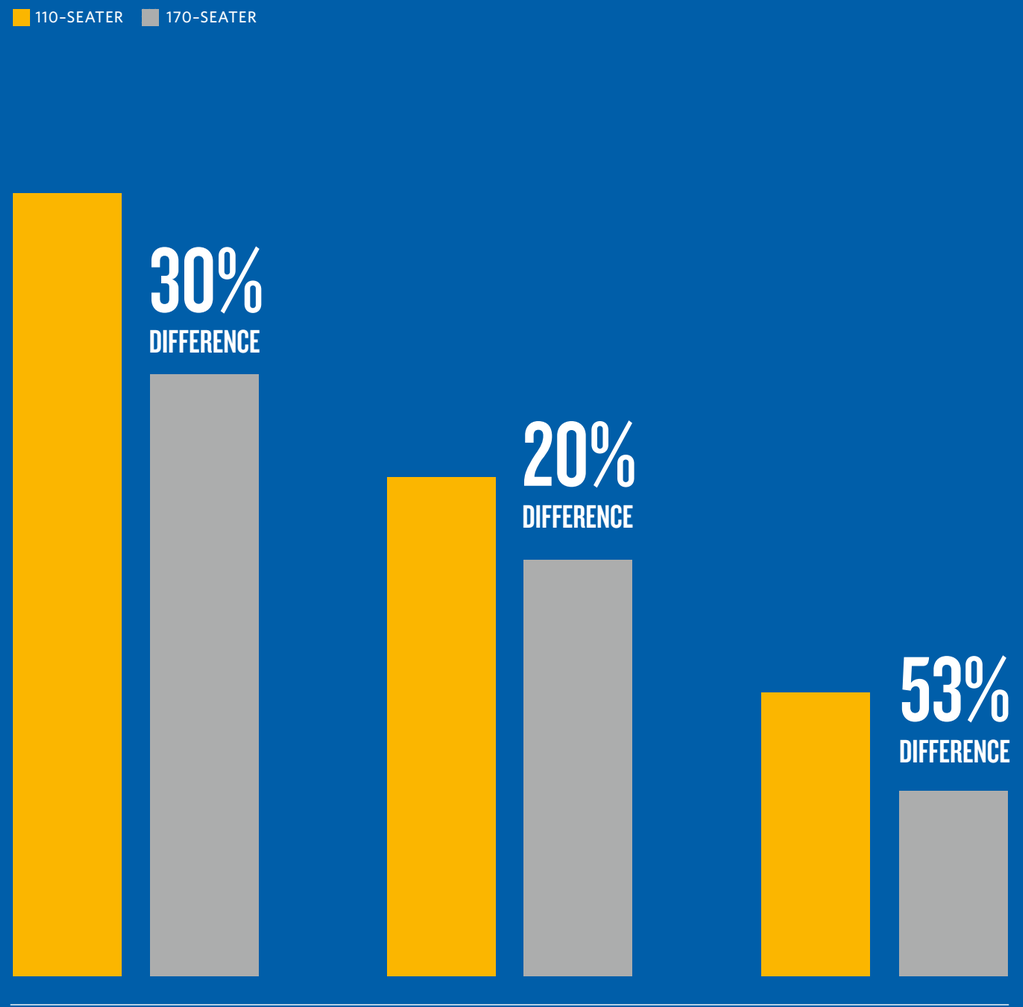
ELEVATING THE BOTTOM LINE

ON A LEG BASIS, a smaller airplane will have higher revenue per seat than a bigger one. The magnitude of this difference will depend on individual market factors, but simulations run by MIT and PODS Research (USA) indicates that a 30% advantage for the smaller aircraft is widely applicable to our example of 110-seater vs. 170-seater. Subtracting cost per seat from revenue per seat yields profit per seat, mostly higher for the 110-seater. Our premise: unit profit is a more comprehensive metric than unit cost.

NO ONE TAKES COST PER SEAT TO SHAREHOLDERS.

110-SEATER LEADS TO BOTH HIGHER REVENUE PER SEAT AND PROFIT PER SEAT.

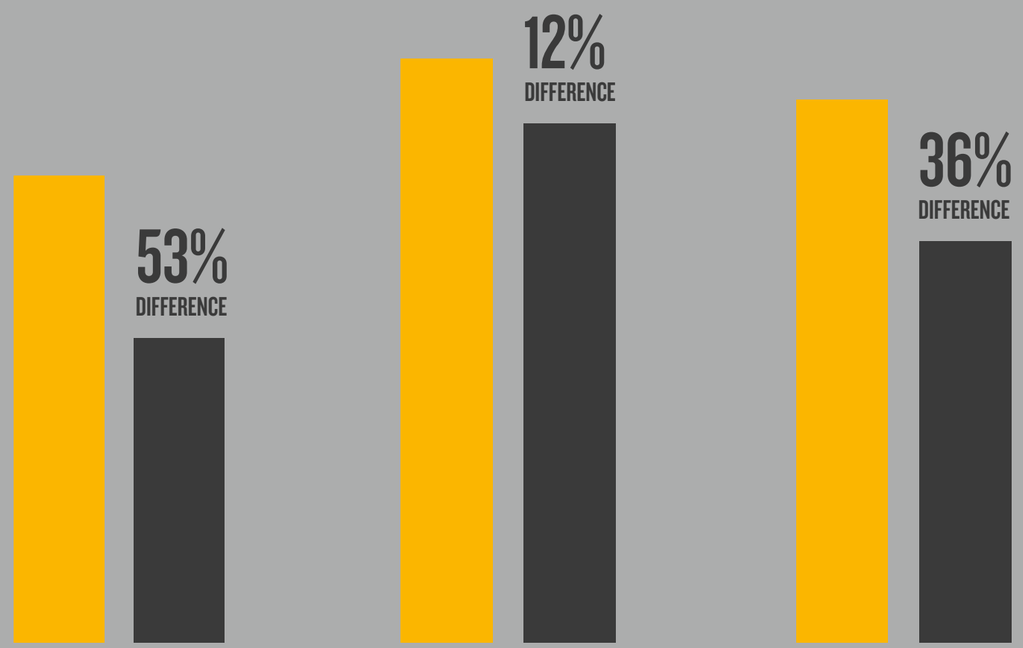
REVENUE AND PROFIT PER SEAT COMPARISONS



*Total cost based on Form 41

RETURN ON AIRCRAFT ASSET (ROaA)

110-SEATER 170-SEATER



ANNUAL PROFIT PER SEAT* ÷ AIRCRAFT VALUE PER SEAT** = RETURN ON AIRCRAFT ASSET

* 1800 Flights per year
** Average Current Market Value of new aircraft From AVITAS, Ascend and IBA

110-SEATER VS. 170-SEATER

+30% REVENUE PER SEAT

+53% PROFIT PER SEAT

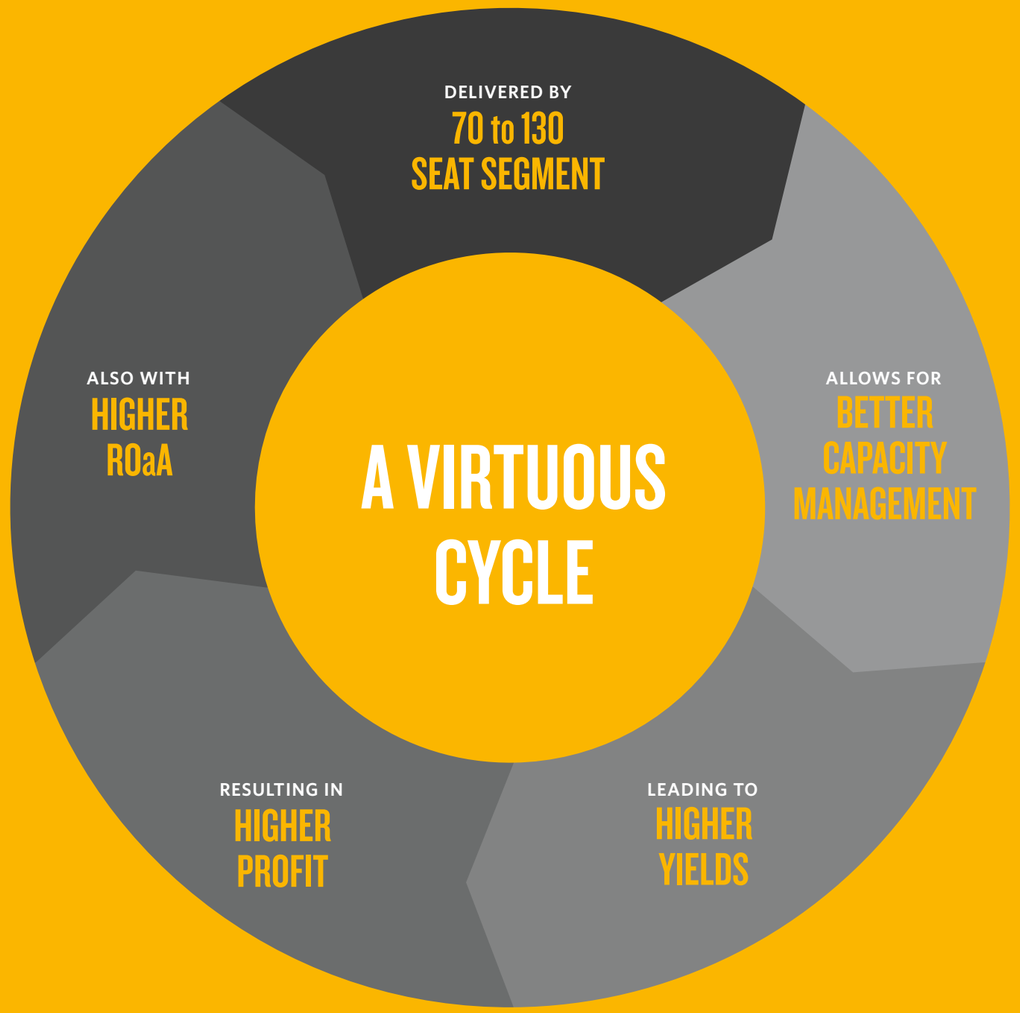
+36% ROaA

CALCULATING TRUE ASSET PERFORMANCE

WE WELCOME THE TREND in which Return on Capital Employed (ROCE) has increasingly been used to drive investments and to measure their performance. Some airlines have set goals on ROCE as they recognized the importance to assure that shareholder value is being built. Simply being profitable is not enough.

Our vision is that as airlines mature, and are listed in public markets, and as shareholders expect information to compare investment alternatives, return on capital employed measures will be even more widely used. Following this trend we believe that Return on Aircraft Assets (ROaA) is an adequate way to measure asset performance and it can be extremely useful to airlines to gauge the efficiency of aircraft asset allocation, and whether shareholder value is being built. We invite you to examine the merits of switching the investment criteria from a cost per seat perspective to profit per seat and ROaA maximization. In doing so, you'll be bringing your asset performance into sharper focus.

THE 70 TO 130 SEAT SEGMENT CAN DELIVER BETTER ASSET PERFORMANCE AND HIGHER RETURN TO SHAREHOLDERS.



A VICIOUS CYCLE BECOMES VIRTUOUS

There is only one way to increase unit revenue and load factor at the same time: it is by flying an airplane with appropriate capacity — through proper capacity management. A rightsized aircraft can catalyze revenue management and capacity allocation systems by better accommodating demand variations and maximizing yield. In doing so, airlines can increase unit profit and ROaA — a virtuous cycle that results in sustainable profitability.

At Embraer, we stand by our premise that Return on Aircraft Assets (ROaA) is a meaningful metric for assessing asset performance. We also stand by our segment. We live by it. And we encourage you to evaluate how 70 to 130 seat jets can improve your earnings and provide a better return on aircraft assets. On the following pages, we summarize the performance-enhancing appeal of our E-Jets and E-Jets E2, the second generation. Think of it as the Power of 2.

MAXIMIZING RETURN ON ASSET STARTS WITH THE ASSET. ENTER E-JETS.

PART THREE

SEIZING OPPORTUNITY

E-JETS AND MAXIMUM ASSET PERFORMANCE

MEASURING UP WITH E-JETS

HOW DO E-JETS FIT WITH THE NEW METRICS OF SUCCESS? Seamlessly. And that's true for current models as well as for E-Jets E2, the next generation. Beyond the appeal of the basic platform itself — providing performance, economy, and comfort across all business models — our continued investment in the original E-Jet family has resulted in now-available improvements such as new avionics, up to 6.4% savings in fuel cost, and longer service intervals.

With over 1,500 orders, E-Jets defined a segment and changed the way the world flies, blurring the line between mainline and regional markets. And the second generation signals even higher achievement than the first. Like the original family, E2 was designed to be the best business-oriented solution for the segment — not simply an exercise in technology. Supported by a broad customer base, active on all continents, the E2 program represents a low-risk investment for airlines and the financial community. Profit = Revenue – Costs. This fundamental equation looms as a constant reality. And it is the driver that gives E-Jets E2 the highest profit potential and asset performance in the 70 to 130 seat segment.

E2 BY THE NUMBERS

15MM The E-Jets family has over 15,000,000 flight hours, which translates into **MATURITY IN OPERATION** for the E2 and higher reliability for your business.

400nm Up to 400 nm or 2 tons **IMPROVED PAYLOAD RANGE** to tap new markets and improve revenue.

25% Up to 25% maintenance savings per seat and up to 24% fuel burn reduction per seat contributes to a **NEW STANDARD IN LIFE CYCLE COST.**

3 DAYS A requirement of less than 3 days of pilot transition training ensures a **SMOOTH TRANSITION FROM CURRENT-GENERATION E-JETS,** minimizing transition costs.

60% A noise footprint reduction of over 60% helps in **BUILDING A SUSTAINABLE FUTURE.**

30% A bin size gain of 30% maximizes revenue opportunities while contributing to a **BENCHMARK PASSENGER EXPERIENCE.**

INTERIOR DESIGN FOR MAXIMUM REVENUE

CONCEIVED AS A TOOL to accommodate different business models, and taking full advantage of revenue management and ancillary revenue opportunities, the modular E2 cabin facilitates the pursuit of premium-fare passengers without sacrificing the budget-sensitive. First-generation E-Jet cabins already enjoy very high passenger ratings. And to improve on the benchmark, the E2 includes several innovations unique to its segment. Thirty percent larger overhead bins — combined with a four-abreast cabin — allow all passengers to stow their carry-on bags. Individual Passenger Service Units (PSUs) emphasize the sense of personal space. A flexible 0.5" pitch adjustment in economy optimizes the use of the cabin. And a new staggered seat configuration in the premium cabin allows for individual seats and vastly enhanced legroom.

Special attention was given to leasing-company requirements for a very liquid asset. For example: predefined structural and electrical provisions for the most common options, modular cabin monuments, and a first class staggered-seating option that uses the same bins and seat tracks as the economy class.

In recognition of outstanding innovation in the field of aircraft cabins, the concept for the E-Jets E2 cabin interior has received the prestigious Crystal Cabin Award in the "Industrial Design and Visionary Concepts" category.

As a whole, the E2 cabin environment is a tribute to passenger comfort, but also to airline and leasing company profitability.

CRYSTAL CABIN AWARD®

FACILITATING THE PURSUIT OF HEALTHY RETURNS.

1 Economy seating with optional integrated tablet holder; an eEnabled Cabin
2 Bin fits IATA 56x45x25 cm (22"x18"x10") cabin baggage in wheels-first position
3 Staggered first class seating
4 Individual PSU
5 Large transparent area inside and window bezel improving passenger perception and facilitating maintenance

SPOTLIGHTING LIFE-CYCLE COST

AS A PRIMARY EMBRAER OBJECTIVE, we want our customers to get the most out of their investment. That means ensuring that our products deliver the highest levels of reliability, efficiency, and profitability from day one.

Although we emphasize revenue, we do recognize the importance of keeping costs down. E2 brings the E-Jet family to a new level of efficiency with double-digit reduction in fuel burn and maintenance costs in all three models — further contributing to unit profit differentiation in comparison with other aircraft.

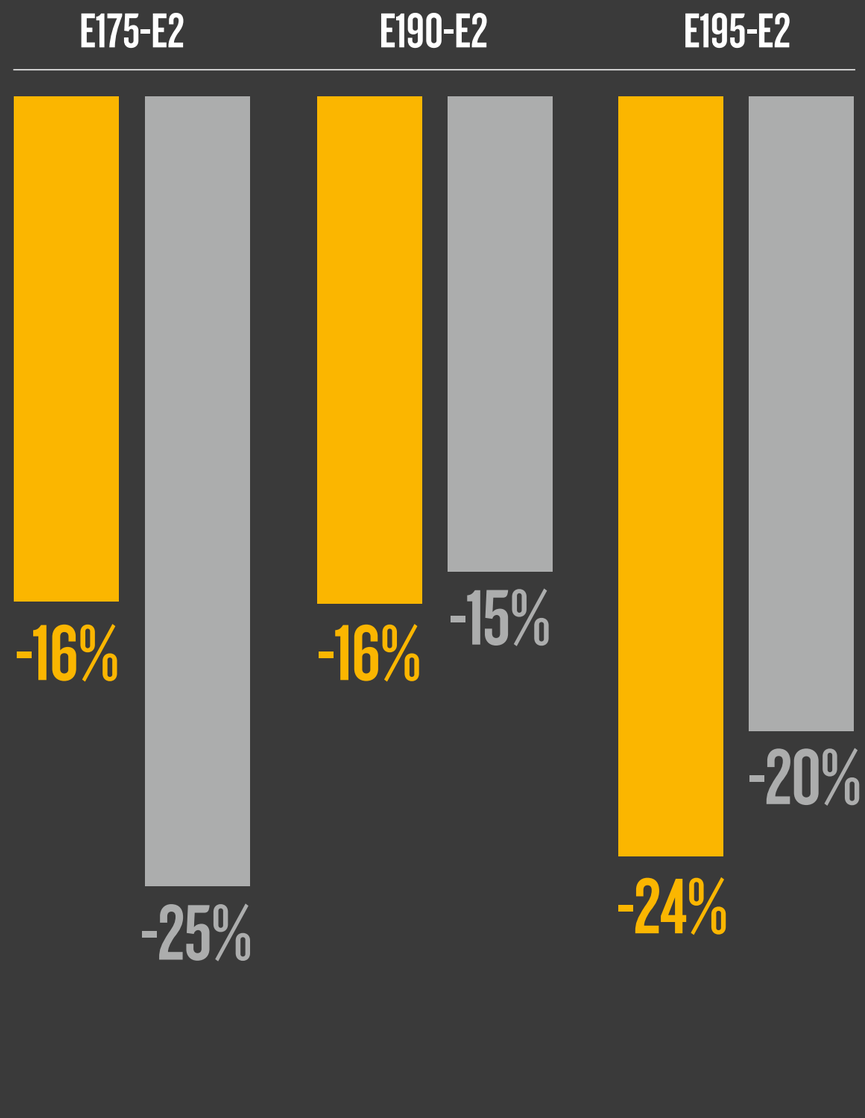
But as good as our aircraft are, we understand that product quality is only part of a larger business environment. We need to deliver complete solutions to help you minimize life cycle cost, so you can focus on your business. Our global Services and Support network includes 37 Service Centers and a central Customer Care Center that provides a prompt response mechanism for a full range of needs, including: field and technical support, material and spare parts, flight and maintenance operations consulting, aircraft upgrades and modifications, comprehensive crew and personnel training, and technical publications and eSolutions.

Maximum integration between the "cockpits" of the eEnabled E-Jets E2 and the Embraer Customer Care Center minimizes life-cycle cost.

LOWER COSTS ALLOW FOCUS ON HIGHER PROFITS.

NEW ECONOMICS

- FUEL BURN PER SEAT VS. CURRENT GENERATION
- MAINTENANCE COST PER SEAT VS. CURRENT GENERATION



A RIGHTSIZED AIRCRAFT DELIVERS THE RIGHT ASSET VALUE

AT EMBRAER, we've spent more than 40 years designing and manufacturing some of the world's finest aircraft — all emerging from our interpretation of industry needs based on keen observation of the marketplace. Over ten years ago, we made the bold move of introducing a whole new category of aircraft based on the opportunities we saw in rightsized aircraft that were easier to fill than big jets — but that also delivered an equal or better passenger experience.

Today, we continue to believe passionately in the potential of lower seat counts as part of a strategy for higher profits and returns. It has become clear over time that merely putting an aircraft into commercial service does not guarantee it will make money for the airline. This is true for a broad range of interconnected reasons. But at its simplest level, the economic viability of a commercial aircraft once in service comes down to the airline's ability to continually sell enough seats on that aircraft — and at high enough fares — to generate an acceptable return on the investment.

As we have attempted to show in the preceding pages, this fundamental new metric of success — Return on Aircraft Assets (ROaA) — is a meaningful measure to consider as airlines transition from pursuit of market share to a focus on higher shareholder returns. Getting the most from your individual aircraft assets is fundamental to sustaining your business, charting your course for the future, and making your shareholders happy.

SHIFTING THE FOCUS FROM HIGHER MARKET SHARE TO HIGHER **SHAREHOLDER RETURNS.**

EMBRAER - LATIN AMERICA
Av. Brigadeiro Faria Lima, 2170
12227-901 – São José dos Campos
SP – Brazil

EMBRAER - NORTH AMERICA
276 SW 34th Street
Fort Lauderdale, FL – 33315

EMBRAER - Europe, Middle East and Africa
Zuiderhof
Jachthavenweg 109
1081 KM, Amsterdam
Netherlands

EMBRAER - ASIA PACIFIC
391B Orchard Road # 24-02
Ngee Ann City – Tower B
238874 - Singapore

EMBRAER - CHINA
Suite 1806, Tower 2
China Central Place Office Building
79, Jianguo Road, Chaoyang District
Beijing 100025
People's Republic of China