

EMBRAER VALUE PROPOSITION FOR MALAYSIA

OVER 50 YEARS OF OPERATION IN EVERY SECTOR

LEADER IN DESIGN, DEVELOPMENT, MANUFACTURING AND AFTER SALES SUPPORT



EMBRAER IS AN ENGINEERING POWERHOUSE, A CERTIFICATION MACHINE. THE COMPANY HAS LAUNCHED OVER 20 AIRCRAFT SINCE 2000.

ALL RELIABLE, HIGH CYCLE UTILIZATION FOR COMMERCIAL SERVICES, PRIVATE FLYING, AGRICULTURAL AND DEFENSE AND SECURITY PURPOSE AIRCRAFT.



MARKET LEADERSHIP

COMMERCIAL AVIATION CUSTOMERS



LEADERSHIP IN THE UPTO 150-SEAT SEGMENT



BOMBARDIER **23%**

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AIRBUS **17%**

ATR **14%**

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RIGHT-SIZED WITH UNBEATABLE ECONOMICS

RATHER THAN A RE-ENGINE, THE E2 IS A NEW DESIGN ON A PROVEN PLATFORM

The E-Jets E2 offers the best of technology on a proven platform, with every detail conceived to deliver maximum efficiency: new engines, new wings, new empennages, new landing gears and landing gear doors, 75% new systems including the 4th generation full fly-by-wire are just some examples of the new developments.

The E2's unbeatable economics make it a true Profit Hunter with a cost per seat equivalent to a narrow body but a significantly lower cost per trip.

17.3% LOWER FUEL BURN ON THE E190-E2 **25.4%** LOWER PER SEAT ON THE E195-E2

ALL NEW ENGINE ↓ 11.5% FUEL BURN

ALL NEW WING **↓** 4.3% FUEL BURN

↓ 1.5% FUEL BURN

4TH GEN FULL FBW

SUITABLY SIZED TO MATCH DOMESTIC AND INTRA-APAC DEMAND

E190-E2 | 97-114 SEATS | 2,850 NM (5,280 KM)

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"We are getting better fuel performance. Maintenance costs are lower, and aircraft utilization are higher. It gives us flexibility to connect dots. That is nirvana for the airline business." John Rodgerson, CEO of Azul Linhas Aereas (Nov 2019)

"The E2 is a welcome addition to KLM. The **environmentally** friendly E195-E2 supports our sustainability goals with lower levels of noise and emissions." Pieter Elbers, CEO of KLM, Nov 2019

E195-E2 | 120-146 SEATS | 2,650 NM (4,900 KM)



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"Expanding Scoot's fleet with the E190-E2 enables us to operate a **modern and fuel-efficient fleet**. The E2 ensures growth by enhancing our connectivity and supporting the further development of the Singapore hub."

Scoot CEO Leslie Thng, Feb 2023





	LONDON HEATHROW	LONDON CITY
AIRPORT CHARACTERISTIC	INTERNATIONAL GATEWAY	CONVENIENCE
DISTANCE TO DOWNTOWN	24KM	11KM
SHARE OF BUSINESS PAX	30%	74%
AVERAGE ONE-WAY FARE	\$93	\$129
% OF LOW COST CARRIERS	20%	8%
DAILY FREQUENCY BY AIRLINE	6.0	9.4
AVERAGE SEATS	213	91

	GALEÃO AIRPORT	SANTOS DUMONT
AIRPORT CHARACTERISTIC	INTERNATIONAL GATEWAY	CONVENIENCE
DISTANCE TO DOWNTOWN	20KM	2KM
SHARE OF BUSINESS PAX	34%	73%
AVERAGE ONE-WAY FARE	\$76	\$100
% OF LOW COST CARRIERS	12%	-%
DAILY FREQUENCY BY AIRLINE	2.9	28.2
AVERAGE SEATS	184	138









TRANSFORMING SUBANG INTO A MAJOR AVIATION HUB

SUBANG UPGRADE WILL ENABLE A MAJOR CONTRIBUTION TO MALAYSIA



E195-E2 136 SEATS / RANGE: 2,500 NM / ~6.0 FH E190-E2 106 SEATS / RANGE: 2,700 NM / ~7.0 FH

80+ POTENTIAL ROUTES 7.5M - 8.0M TOTAL PASSENGERS HANDLED IN SZB	
DIRECT 2,800 - 2,950 	\$1 GROSS VALUE ADDED § § § § §
SUPPLY CHAIN 5,300 - 5,450 ^{JOBS}	\$1. GROSS VALUE ADDED §§§§§§
INDUCED 9,600 - 10,100 JOBS JOBS Image: State of the state of	\$1 GROSS VALUE ADDED § § § § §

Subang airport offers incredible opportunities due to its strategic position, well-developed infrastructure, and significant prospective demand in the region.

Subang Airport Regeneration Plan (SARP) will unlock the air transport industry, including airlines and its supply chain. The airport has huge potential as shown in the infographic above.





\$140 M - \$155 M DED \$ \$ \$ \$ \$ \$

\$130 M - \$ 140 M DED \$ \$ \$ \$ \$ \$ \$

\$190 M - \$ 225 M ^{ded} \$ \$ \$ \$ \$ \$ \$



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COMPREHENSIVE FLEET STRATEGY

THE E-JETS E2 PROVIDES FLEXIBILITY TO IMPROVE CONNECTIVITY



- International long-haul operation out of KLIA
- Routes: Europe, Middle East, India, Japan and Australia
- High-density, mid-haul trunk routes and slot constrained airports
- Routes: SE Asia, China and India
- Broader network with new exclusive direct services
- Routes: SE Asia, China, Japan, South Korea and India
- Short-haul regional operation
- Routes: Intra Peninsular Malaysia and Borneo Island

SCOPE FOR NETWORK OPTIMIZATION

THE E-JETS E2 IS THE MOST SUITABLE AIRCRAFT TO CONNECT MALAYSIA











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RIGHT-SIZED JET WITH OUTSTANDING ECONOMICS

THE E-JETS E2 OFFERS THE LOWEST OPERATING COST TO CONNECT MALAYSIA

PER TRIP BAS	IS E2 VERSUS	A320NEO	A220-300
\diamond	FUEL	-18%	-10%
X	MAINTENANCE	-30%	-15%
	NAVIGATION AND LANDING FEES	-22%	-10%
•	CREW	-11%	SAME
Ż	PASSENGER RELATED COSTS	-25%	-9%

Fuel: 1.Lightest narrow bodies = lowest fuel burn | 2.Least drag (aerodynamic optimizations) = lowest fuel burn | 3.Full fly by wire and optimizations = lower fuel burn · Direct maintenance: 1.Least drag = least thrust; least thrust = highest time on wing = lowest engine maintenance costs; 40% higher time on wing than nearest competitor | 2. Highest airframe check intervals (10,000 FH) + learnings from E1 = lowest airframe maintenance costs. • Airport, nav. & landing fees: 1. Lightest narrow-bodies = lowest airport and ATC charges • Passenger related costs: 1. Less seats available to sell = lower passenger related costs • Crew Salary: 1. One less cabin crew = lower crew salary costs.

THE KEY FOR REINVENTION

RIGHT-SIZED JETS WITH OUTSTANDING ECONOMICS



C Lower Operating Costs + Right Capacity MORE CONNECTIVITY

The E-Jets E2 enables airlines to open new routes and pioneer in new markets throughout the country and even beyond Malaysia. Regional aviation development and enhanced connectivity is at the heart of any major aviation hub. 120 new routes not only improve the flow of people and goods in an efficient way, but also contribute to the overall economic growth of the country.

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O Lower Operating Costs + Right Capacity HIGHER PROFITABILITY

Over 50% of narrow-body markets operate with low load factors. The E-Jets E2 provides the desired flexibility and ideal economics for these sectors, yielding in annual operating cost savings of more than \$250 million when compared to the current generation narrow-body fleet.

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Additional annual frequency **20,000 NEW FLIGHTS**

mismatch between aircraft capacity and market demand. The E-Jets E2 enables airlines to increase frequency in key markets due to a reduced cost base and adequate capacity.

New Routes with Nonstop Service **120 NEW CONNECTIONS**

Operating Cost Savings Per Year \$ 250 MILLION

TOWARDS A MORE SUSTAINABLE **AVIATION INDUSTRY**

THE E-JETS E2 OFFERS BETTER CONNECTIVITY WITH SMALLER CARBON FOOTPRINT



The E-Jets E2 emits **33% less CO2**

with an average demand per flight of 120 passengers in Malaysia

KUL-BKI | 10,300 trips/year | 3.15g of CO2 emissions per gram of fuel | E2 fuel burn 2,307kg, Narrowbody fuel burn 3,449kg | 900km Sector length

~700 This equals to planting...

football fields of trees annually

THE E-JETS E2 HAS THE LOWEST NOISE PROFILE

Noise Footprint out of Subang Airport | Takeoff Runway 15



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E195-E2 65 dBA Contour Area: 11.7 KM²

ATR72-600 65 dBA Contour Area: 15.1 KM²

B737-800 65 dBA Contour Area: 64.8 KM²



BEST PASSENGER EXPERIENCE

THE E-JETS E2 OFFERS IMPROVED PERSONAL SPACE



Completely redesigned cabin with unprecedented space and innovative premium seating layout



Wheels-first baggage position maximizes the number of bags onboard



No obstruction under the double-seat allows 1 extra bag under the seats



Premium passenger experience with wireless connection



Large window frames makes the cabin feel larger and brighter

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DESIGNING THE FUTURE

The world is always changing, and so is the aviation industry. Embraer is built on innovation, and we are working diligently to shape the future of aviation. Despite all the unknowns, one thing is certain: the future of aviation must have a lower impact. That means lower emissions, reduced noise, and less fuel consumption. Embraer and Malaysia can work together to create a more sustainable eco-system and improved connectivity for the country.

ENERGIA FAMILY

Our Energia project is exploring a range of sustainable concepts for transporting up to 50 passengers. This project is examining different energy sources, propulsion architectures, and airframe layouts to reduce our carbon emissions by 50% starting in 2030. A key step toward achieving net carbon neutrality by 2050.











CHALLENGE. CREATE. OUTPERFORM.

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