

MonteCristoAir

Department Primer for: Fleet Evaluation

At MonteCristoAir, the Fleet Evaluation Department includes the following functions:

- Fleet Management

Responsibilities include:

- Business case preparation for fleet evaluation
- Aircraft value analysis /comparisons

Departmental Perspective on the Challenges and Opportunities

If we want to grow, we have to invest in new aircraft. It is true that we can improve utilization rates on some of our existing routes, but new markets mean new airplanes.

We don't have to acquire new aircraft right away. We can be strategic in how we approach this. Maybe we can upgrade part of our fleet by purchasing used aircraft. We can plan for new airplanes further out in time—maybe in years three to five of a five-year plan.

We have to make sure that as our fleet evolves it helps to make us more profitable. This includes not only ownership costs, but also operating economics. It is critical that we ensure our fleet is capable of performing the missions we want to fly. And we need to make sure we're flying aircraft that are the best fit for the size of our markets. Maximizing revenue is always crucial. We don't want to be spilling too much traffic. We also need to recognize that there are benefits from commonality within a fleet, and costs of complexity in flying a mixed fleet.

Specific Departmental Assignment:

In addition to the items stated in the MonteCristoAir overview, by the end of the training program you should also incorporate ideas into the final presentation to address the following:

- Fleet strategy recommendation
- Value analysis: what criteria should MonteCristoAir include in the fleet decision?

MonteCristoAir (Fleet Evaluation)
Airplane Characteristics - Current Fleet

Airplane Model	<u>737-300</u>	<u>MD-82</u>	<u>767-300ER</u>
Type (Quantity)	CFM56-3C1(2)	JT8D-219(2)	CF6-80C2B7F(2)
Thrust(kg) BET	10,402	9,526	28,169
Airplane Weights(kg)			
Maximum Taxi (MTW)	63,050	68,267	187,337
Maximum Takeoff (MTOW)	62,824	67,813	186,880
Maximum Landing (MLW)	52,890	58,968	145,152
Maximum Zero Fuel (MZFW)	49,715	55,339	133,812
Operating Empty (OEW, incl. Tare)	32,822	37,549	91,945
Seats (FC/BC/EC) - Total			
By Class	8/0/118	14/0/127	24/0/245
Pitch (in)	36/0/32	36/0/32	38/0/32
Abreast	4/0/6	4/0/5	6/0/7
Performance			
Design Range(KM)	4,022	3,407	10,038
Payload(kg)			
Passenger + Baggage	12,002	13,431	25,624
Max. Volumetric	14,049	15,931	36,551
Max. Structural	16,892	17,790	41,867
Gross Volume(cu m)			
Container	0	0	50
Pallet	0	0	47
Bulk	30	35	12
Fuel Capacity(L)	20,104	22,107	90,774

MonteCristoAir (Fleet Evaluation)
Airplane Characteristics -- Single-Aisle Candidates

Airplane Model	<u>737-700W</u>	<u>737-800W</u>	<u>737-900ERW</u>	<u>A319</u>	<u>A320-200</u>	<u>A321-200</u>
Engine Type (Quantity)	CFM56-7B24E(2)	CFM56-7B26E(2)	CFM56-7B27EF(2)	CFM56-5B6/3(2)	CFM56-5B4/3(2)	CFM56-5B3/3(2)
Thrust(kg) BET	10,750	11,839	12,293	10,660	12,020	14,697
Airplane Weights (kg)						
Maximum Taxi (MTW)	70,308	79,244	85,368	75,901	78,400	85,413
Maximum Takeoff (MTOW)	70,080	79,016	85,141	75,500	78,000	85,005
Maximum Landing (MLW)	58,605	66,362	71,351	62,502	65,999	75,524
Maximum Zero Fuel (MZFW)	55,203	62,733	67,722	58,501	62,496	71,487
Operating Empty (OEW, incl. Tare)	38,211	41,391	44,221	40,162	42,008	47,978
Seats (FC/BC/EC) - Total	126	162	180	126	150	183
By Class	8/0/118	12/0/150	12/0/168	8/0/118	12/0/138	12/0/171
Pitch (in)	36/0/32	36/0/32	36/0/32	36/0/32	36/0/32	36/0/32
Abreast	4/0/6	4/0/6	4/0/6	4/0/6	4/0/6	4/0/6
Performance						
Design Range(KM)	6,032	5,531	5,038	5,516	5,048	4,120
Payload(kg)						
Passenger + Baggage	12,002	15,431	17,146	12,002	14,288	17,432
Max. Volumetric	13,679	18,723	21,152	13,715	16,908	21,409
Max. Structural	16,992	21,342	23,501	18,338	20,487	23,510
Gross Volume(cu m)	27	44	52	28	37	52
Container	0	0	0	0	0	0
Pallet	0	0	0	0	0	0
Bulk	27	44	52	28	37	52
Fuel Capacity (LITER)	26,025	26,025	26,025	23,859	23,859	23,735

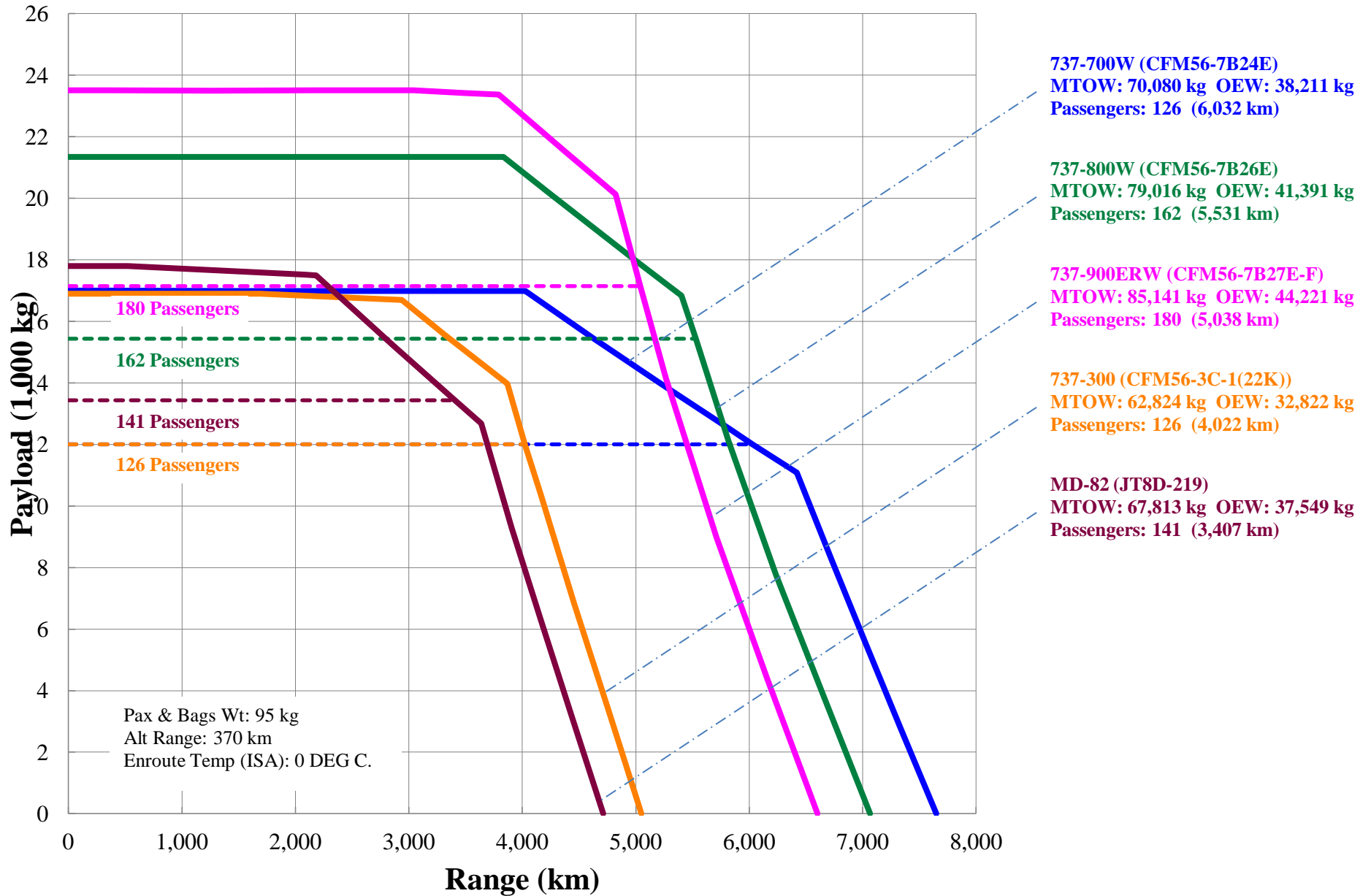
MonteCristoAir (Fleet Evaluation)
Airplane Characteristics -- Single-Aisle Candidates

Airplane Model	<u>737-7</u>	<u>737-8</u>	<u>737-9</u>	<u>A319neo</u>	<u>A320neo</u>	<u>A321neo</u>
Engine Type (Quantity)	LEAP-1B25(2)	LEAP-1B25(2)	LEAP-1B27(2)	LEAP-1A24(2)	LEAP-1A26(2)	LEAP-1A32(2)
Thrust(kg) BET	11,340	11,340	11,975	10,705	11,975	14,606
Airplane Weights (kg)						
Maximum Taxi (MTW)	72,576	82,419	88,543	75,901	79,394	93,895
Maximum Takeoff (MTOW)	72,348	82,191	88,314	75,500	78,998	93,499
Maximum Landing (MLW)	61,463	69,310	74,345	64,457	67,813	79,471
Maximum Zero Fuel (MZFW)	58,333	65,953	70,988	60,873	64,729	75,887
Operating Empty (OEW, incl. Tare)	41,591	44,711	46,884	43,174	45,047	50,658
Seats (FC/BC/EC) - Total						
By Class	126	162	180	126	150	183
Pitch (in)	8/0/118	12/0/150	12/0/168	8/0/118	12/0/138	12/0/171
Abreast	36/0/32	36/0/32	36/0/32	36/0/32	36/0/32	36/0/32
	4/0/6	4/0/6	4/0/6	4/0/6	4/0/6	4/0/6
Performance						
Design Range(KM)	6,677	6,534	6,044	6,415	5,932	4,904
Payload(kg)						
Passenger + Baggage	12,002	15,431	17,146	12,002	14,288	17,432
Max. Volumetric	13,679	18,723	21,152	13,715	16,908	21,409
Max. Structural	16,742	21,242	24,104	17,699	19,682	25,229
Gross Volume(cu m)						
Container	27	44	52	28	37	52
Pallet	0	0	0	0	0	0
Bulk	0	0	0	0	0	0
	27	44	52	28	37	52
Fuel Capacity (LITER)	25,941	25,941	25,941	23,761	23,761	23,598

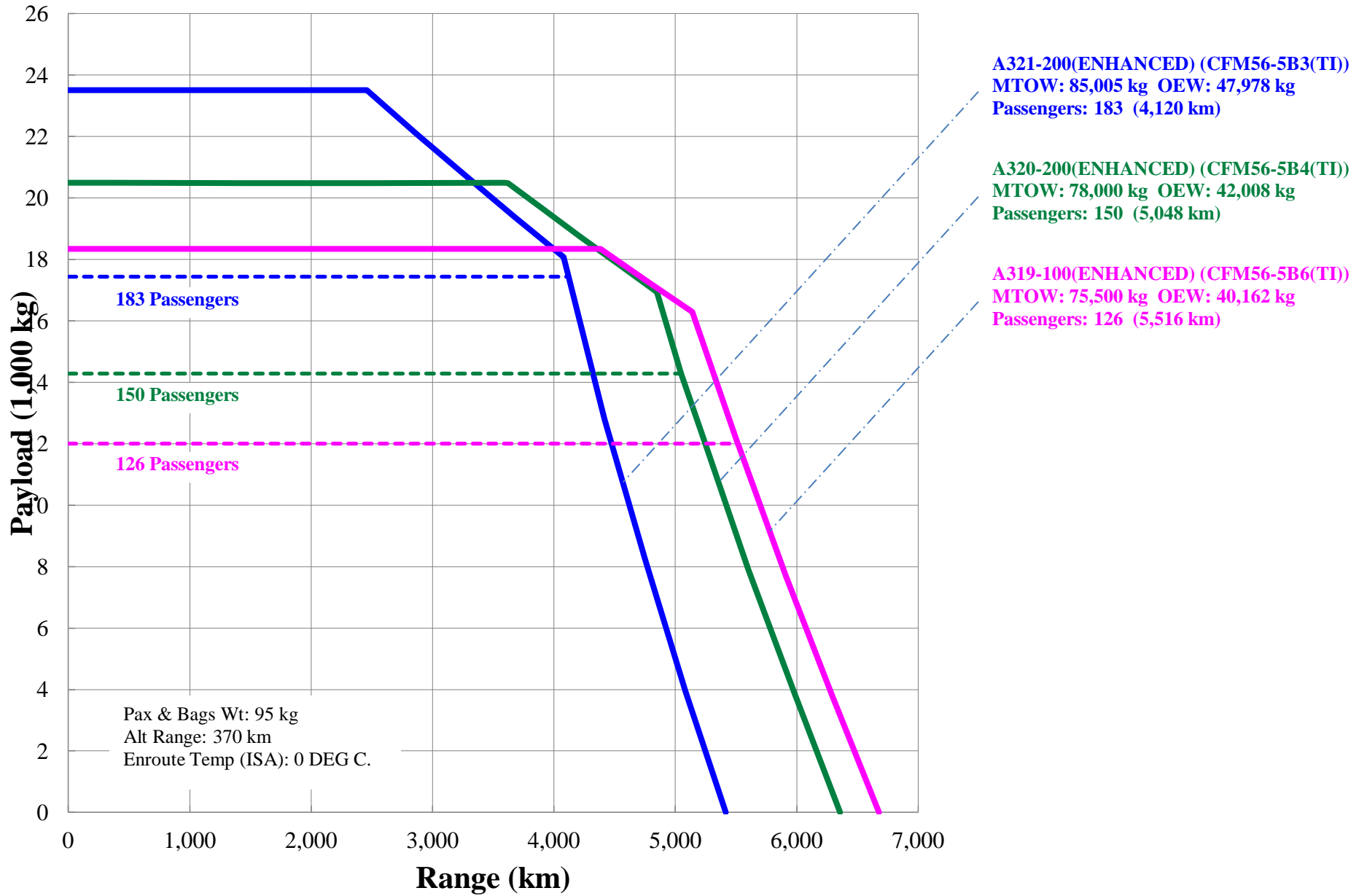
MonteCristoAir (Fleet Evaluation)
Airplane Characteristics -- Twin-Aisle Candidates, Three-Class Interiors

Airplane Model	<u>777-200ER</u>	<u>A330-200Enh</u>	<u>A330-300Enh</u>	<u>787-8</u>	<u>787-9</u>	<u>A350-900</u>
Engine Type (Quantity)	GE90-85B(2)	CF6-80E1A4(2)	CF6-80E1A4(2)	GEnx-1B67(2)	GEnx-1B74/75(2)	Trent XWB-84(2)
Thrust (kg) BET	38,420	30,332	30,332	30,391	33,612	38,102
Airplane Weights(kg)						
Maximum Taxi (MTW)	263,995	238,911	235,917	228,388	251,748	283,319
Maximum Takeoff (MTOW)	297,557	238,000	235,010	227,930	250,837	282,407
Maximum Landing (MLW)	208,656	181,984	187,019	172,368	192,780	210,334
Maximum Zero Fuel (MZFW)	195,048	170,009	173,003	161,028	181,440	197,588
Operating Empty (OEW, incl. Tare)	146,150	122,474	125,829	117,709	125,874	145,016
Seats (FC/BC/EC) - Total						
By Class	301	245	262	242	280	299
Pitch (in)	16/58/227	20/52/173	15/52/195	16/44/182	16/50/214	16/58/225
Abreast	60/38/32	60/38/32	61/39/32	61/39/32	61/39/32	61/39/32
	6/7/9	6/6/8	5/6/8	6/6/9	6/6/9	6/6/9
Performance						
Design Range (KM)	13,940	12,522	10,358	14,029	14,656	14,330
Payload (kg)						
Passenger + Baggage	28,672	23,338	24,957	23,052	26,672	28,482
Max. Volumetric	45,478	37,994	40,089	37,129	44,672	46,059
Max. Structural	48,898	47,535	47,174	43,317	55,564	52,572
Gross Volume (cu m)						
Container	151	130	136	124	154	154
Pallet	63	63	45	54	72	72
Bulk	71	47	71	59	71	71
	17	20	20	11	11	11
Fuel Capacity (L)	171,176	139,114	97,531	126,206	126,372	138,016

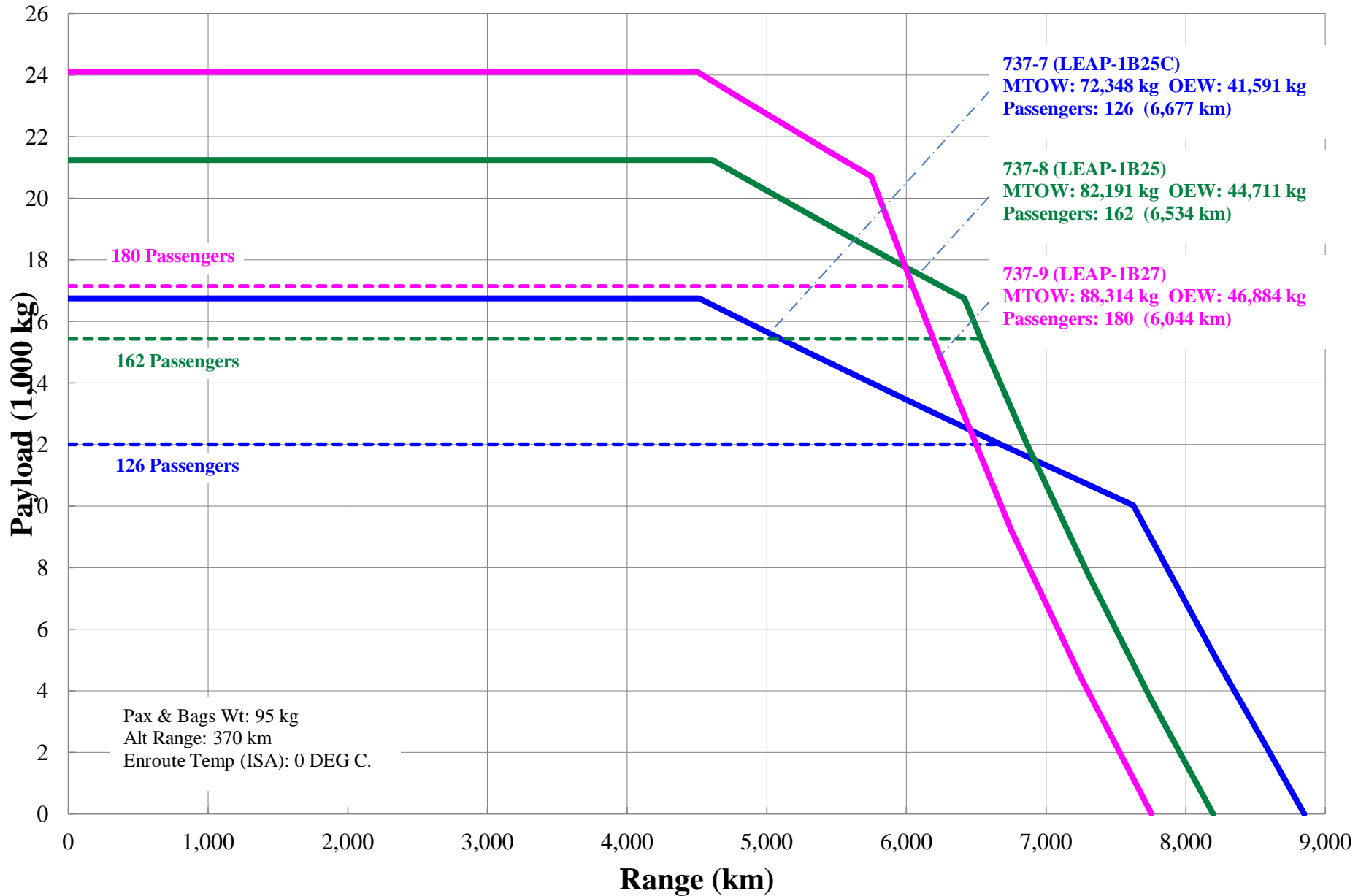
Payload - Range Capability



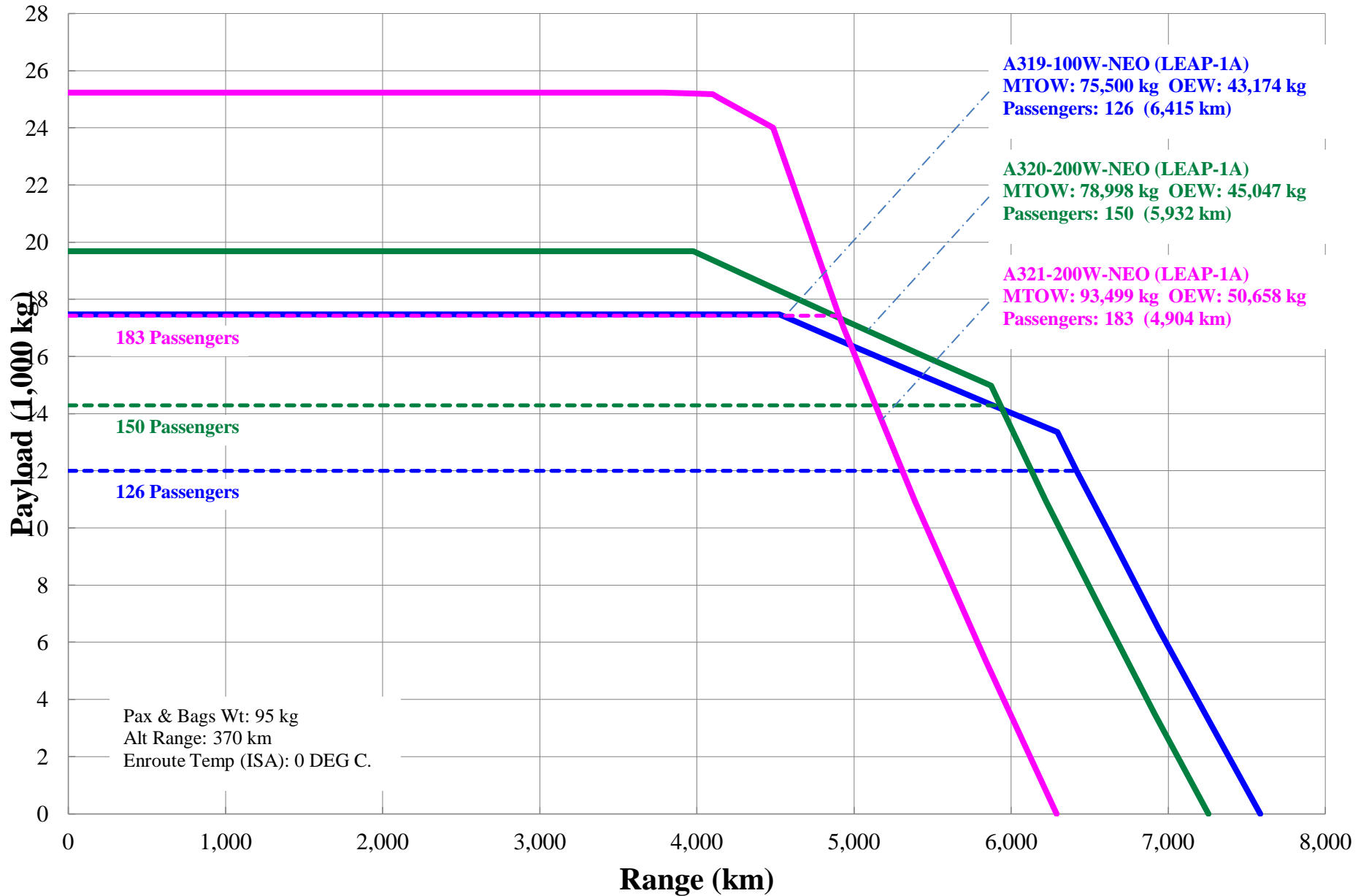
Payload - Range Capability



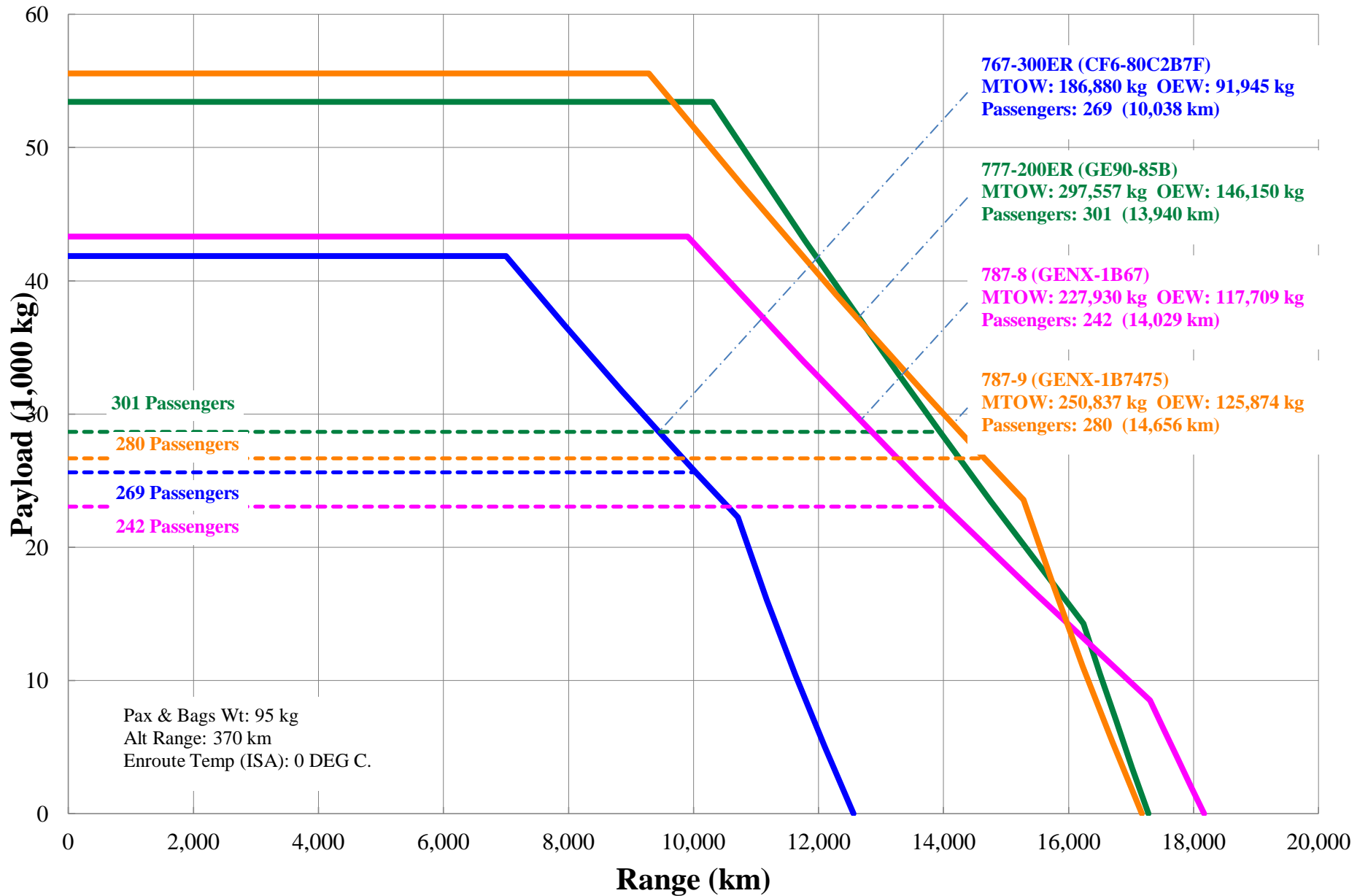
Payload - Range Capability



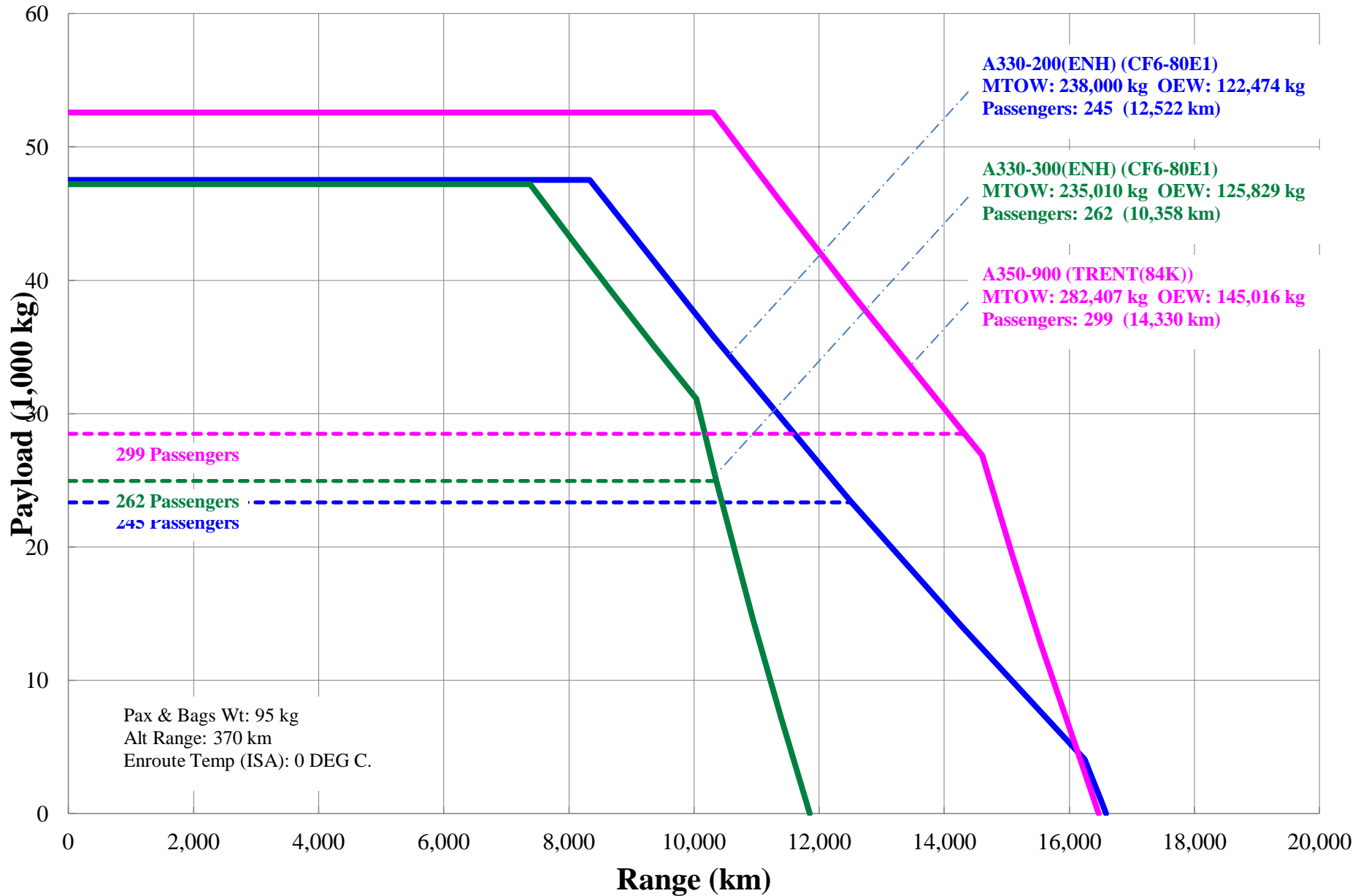
Payload - Range Capability



Payload - Range Capability



Payload - Range Capability





Internal Company Document

To: Fleet Evaluation Department
From: L. Koins, Chief Financial Officer
Subject: Operating Costs

Here is our development of aircraft operating costs at the trip level. These costs are in accordance with MonteCristoAir's operating cost rules. Consistent with those rules, these costs do not include "ownership" costs. I believe that these costs for new airplanes will be determined by a vigorous competition between the aircraft manufacturers and have not been included in advance.

Operating Cost Development -- Existing Fleet

Airplane Model	<u>737-300</u>	<u>MD-82</u>	<u>767-300ER</u>
Study Range	500 NM 926 KM	500 NM 926 KM	1500 NM 2778 KM
Maximum Takeoff Weight (KG)	63,050	68,267	187,337
Engine Type	CFM56-3C1	JT8D-219	CF6-80C2B7F
Seats	126	141	269
Utilization (Trips per Year)	1,845	1,845	725
Cash Airplane Related Operating Costs			
(US Dollars per Trip)	9,588	10,487	66,871
Flight Crew	1,100	1,074	7,505
Cabin Crew	542	624	6,682
Fuel	3,317	3,981	33,547
Total Maintenance	1,709	1,713	8,193
Landing Fee	1,343	1,450	2,596
Navigation Fee	1,037	1,077	4,809
Airplane Station	480	514	3,428
Ground Power	59	53	111

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Operating Cost Development -- New Single-Aisle Airplanes

Airplane Model	737-700W	737-800W	737-900ERW	A319	A320	A321
Study Range(KM)	925	925	925	925	925	925
Maximum Takeoff Weight(kg)	70,081	79,017	85,141	75,524	78,001	85,005
Engine Type	CFM56-7B24E	CFM56-7B26E	CFM56-7B27EF	CFM56-5B6/3	CFM56-5B4/3	CFM56-5B3/3
Seats	126	162	180	126	150	183
Utilization (Trips per Year)	1,845	1,845	1,845	1,845	1,845	1,845
Cash Airplane Related Operating Costs	8,803	9,662	10,225	9,170	9,666	10,679
Flight Crew	1,071	1,068	1,069	1,066	1,067	1,066
Cabin Crew	528	687	756	525	641	765
Fuel	3,040	3,362	3,604	3,101	3,293	3,861
Total Maintenance	1,037	1,094	1,144	1,191	1,262	1,334
Landing Fee	1,499	1,690	1,821	1,615	1,668	1,818
Navigation Fee	1,095	1,163	1,207	1,137	1,155	1,206
Airplane Station	480	546	571	481	527	576
Ground Power	53	53	53	53	53	53

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Airplane Model	737-7	737-8	737-9	A319NEO	A320NEO	A321NEO
Study Range(KM)	925	925	925	925	925	925
Maximum Takeoff Weight(kg)	72,349	82,192	88,316	75,502	78,999	93,501
Engine Type	LEAP-1B25	LEAP-1B25	LEAP-1B27	LEAP-1A24	LEAP-1A26	LEAP-1A32
Seats	126	162	180	126	150	183
Utilization (Trips per Year)	1,845	1,845	1,845	1,845	1,845	1,845
Cash Airplane Related Operating Costs	8,478	9,282	9,770	8,850	9,328	10,468
Flight Crew	1,065	1,069	1,070	1,068	1,071	1,068
Cabin Crew	525	688	756	526	644	767
Fuel	2,671	2,915	3,093	2,787	2,939	3,363
Total Maintenance	1,025	1,069	1,111	1,185	1,243	1,379
Landing Fee	1,547	1,758	1,889	1,615	1,689	1,999
Navigation Fee	1,113	1,186	1,229	1,137	1,163	1,265
Airplane Station	479	544	569	480	526	574
Ground Power	53	53	53	53	53	53

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Operating Cost Development -- New Single-Aisle Airplanes

Airplane Model	737-700W	737-800W	737-900ERW	A319	A320	A321
Study Range(KM)	2,776	2,776	2,776	2,776	2,776	2,776
Maximum Takeoff Weight(kg)	70,081	79,017	85,141	75,524	78,001	85,005
Engine Type	CFM56-7B24E	CFM56-7B26E	CFM56-7B27EF	CFM56-5B6/3	CFM56-5B4/3	CFM56-5B3/3
Available seats	126	162	180	126	150	183
Utilization (Trips per Year)	1,045	1,045	1,045	1,045	1,045	1,045
Initial Airplane Age (Yrs)	0.0	0.0	0.0	0.0	0.0	0.0
Cash Airplane Related Operating Costs	18,886	20,791	21,943	19,736	20,874	23,319
Flight Crew	2,616	2,590	2,584	2,598	2,593	2,590
Cabin Crew	1,288	1,667	1,827	1,280	1,559	1,859
Fuel	7,654	8,602	9,321	7,937	8,522	10,126
Total Maintenance	1,551	1,623	1,585	1,899	1,974	2,112
Landing Fee	1,499	1,690	1,821	1,615	1,668	1,818
Navigation Fee	3,285	3,489	3,621	3,411	3,466	3,618
Airplane Station	940	1,078	1,131	942	1,039	1,143
Ground Power	53	53	53	53	53	53

MonteCristoAir

Airplane Model	737-7	737-8	737-9	A319NEO	A320NEO	A321NEO
Study Range(KM)	2,776	2,776	2,776	2,776	2,776	2,776
Maximum Takeoff Weight(kg)	72,349	82,192	88,316	75,502	78,999	93,501
Engine Type	LEAP-1B25	LEAP-1B25	LEAP-1B27	LEAP-1A24	LEAP-1A26	LEAP-1A32
Available seats	126	162	180	126	150	183
Utilization (Trips per Year)	1,045	1,045	1,045	1,045	1,045	1,045
Initial Airplane Age (Yrs)	0.0	0.0	0.0	0.0	0.0	0.0
Cash Airplane Related Operating Costs	17,927	19,668	20,779	18,797	19,838	22,299
Flight Crew	2,577	2,576	2,578	2,593	2,595	2,588
Cabin Crew	1,270	1,657	1,823	1,277	1,560	1,858
Fuel	6,678	7,422	7,940	7,034	7,472	8,705
Total Maintenance	1,529	1,571	1,683	1,878	1,946	2,164
Landing Fee	1,547	1,758	1,889	1,615	1,689	1,999
Navigation Fee	3,338	3,558	3,688	3,410	3,488	3,795
Airplane Station	936	1,073	1,124	938	1,034	1,137
Ground Power	53	53	53	53	53	53

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Operating Cost Development -- New Twin-Aisle Airplanes

Airplane Model	767-300ER	777-200ER	A330-200Enh	A330-300Enh	787-8	787-9	A350-900
Study Range(KM)	5,551	5,551	5,551	5,551	5,551	5,551	5,551
Maximum Takeoff Weight(kg)	186,883	297,562	238,004	235,010	227,934	250,841	282,411
Engine Type	CF6-80C2B7F	GE90-85B	CF6-80E1A4	CF6-80E1A4	GEEx-1B67	GEEx-1B74/75	Trent XWB-84
Seats	269	301	245	262	242	280	299
Utilization (Trips per Year)	725	725	725	725	725	725	725
Cash Airplane Related Operating Costs	66,871	79,244	69,297	71,715	60,622	65,650	73,200
Flight Crew	7,505	7,273	7,477	7,493	7,155	7,116	7,169
Cabin Crew	6,682	7,435	6,614	6,737	5,993	6,772	7,290
Fuel	33,547	42,171	36,062	37,521	30,214	32,746	37,296
Total Maintenance	8,193	8,538	7,123	7,875	5,498	6,453	7,981
Landing Fee	2,596	4,133	3,306	3,264	3,166	3,484	3,922
Navigation Fee	4,809	5,739	5,272	5,246	5,186	5,378	5,626
Airplane Station	3,428	3,703	3,277	3,414	3,221	3,512	3,663
Ground Power	111	253	166	166	189	189	253

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E-mail Message

From: E.B. Masters, Chief Executive Officer
To: Fleet Evaluation Department
Subject: [New international destination opportunities](#)

Since liberalization, international business travel and tourism has been increasing. Lufthansa, All Nippon Airways, and Hainan Airlines have begun regular service into Pepperz from their hub cities. We can't sit still and watch our competitors dominate international markets. We must assess if it is better for use to compete in these markets or to retreat to shorter range operations.

When I study the world map, I see we have many popular international destinations available to us. Most are within 10,000 kilometers, but some very lucrative markets are approximately 14,000 kilometers from Pepperz. This would require us to make a technical (fuel) stop to reach them, or obtain new 5th Freedom rights with certain countries so we can pick up traffic at their major cities and continue on to further destinations.

Can we effectively compete on international routes by only offering one-stop services against the non-stops offered by our competition? Would we have to significantly lower our ticket prices to attract traffic? The range of our current Boeing 767s for passengers and baggage only is approximately 10,000 kilometers, so we also need to assess the lost potential of carrying additional cargo on these international routes.

Is a better tactic to acquire different twin aisle aircraft with enough range and payload capabilities to serve international destinations 14,000 kilometers from Pepperz on a non-stop basis? Can we make money given the likely higher monthly lease rates for these aircraft? Which twin aisle aircraft should we consider for this tactic?

Please address this in your report to our Board. Since these very long distance operations are new to us, please include details showing not only your value assumptions, but also to assure our Board that the twin aisle aircraft we choose, if we do decide to compete in this market, have the performance capabilities to successfully complete the missions.

MonteCristoAir



E-mail Message

From: L. Koins, Chief Financial Officer
To: Fleet Evaluation Department

Subject: Value Analysis

I have just reviewed our consultants' value comparison of the 787-8 and the 767-300ER. I was very impressed and strongly believe this is the way we should evaluate all aircraft in the future. That being said – I am skeptical that the 787-8 is worth only \$24 million more than the 767-300ER. I believe that there are additional elements that should enter into the analysis. Elements such as ancillary revenue, future CO2 and noise charges, longer range, passenger preference, and Boeing's Gold Care option come to mind.

Therefore, I would like you to do the following:

- 1) Establish a methodology for valuing each of those elements
- 2) Provide a high level estimate of the comparative value of each element
- 3) Identify at least one or two additional elements that should be considered

Since we had not narrowed down the product offerings for single-aisle, we did not ask the consultants to provide us a value comparison for the single-aisle product offering. It seems to me that our team should be able to recommend a single-aisle product comparison that would be optimal for existing and future single-aisle routes and do a similar value comparison to the one provided by our consultants for the 787-8 and the 767-300ER. Due to the short turnaround, I am asking you to focus on only the most important elements in the evaluation of the single-aisle product.

Therefore, I would like you to do the following:

- 4) Recommend two single-aisle aircraft to be compared
- 5) Provide a high level estimate of the comparative value for three to five of the most important elements

I expect to see these recommendations incorporated into the presentation at the Strategy Review Meeting. They will ultimately help us build a business case for acquiring new generation aircraft and securing our future competitiveness.