Technical Working Group Meeting #2

Diving Deeper Part I

September 18, 2019, 4pm

ASE VISION

INFORM. INVOLVE. COLLABORATE.

ASPEN/PITKIN COUNTY AIRPORT

Technical Working Group

Meeting #2 – Agenda Items

I. Introduction and Welcome
   - *Review ground rules and updated strategic questions*

II. Meeting I Follow Up – Additional Metrics Fleet Mix
   - *Review requested metrics*

III. Values Scorecard Exercise
   - *Ranking Available Aircraft to Nosie, Emissions and Community Values*

IV. Forecast Overview and Presentation
   - *Methodology and Approach to Forecast, Linda Perry, LeighFisher*

V. Lighting Round and Discussion
   - *Key Takeaways and Considerations*

VI. Next Meeting

ASPEN/PITKIN COUNTY AIRPORT

ASE VISION

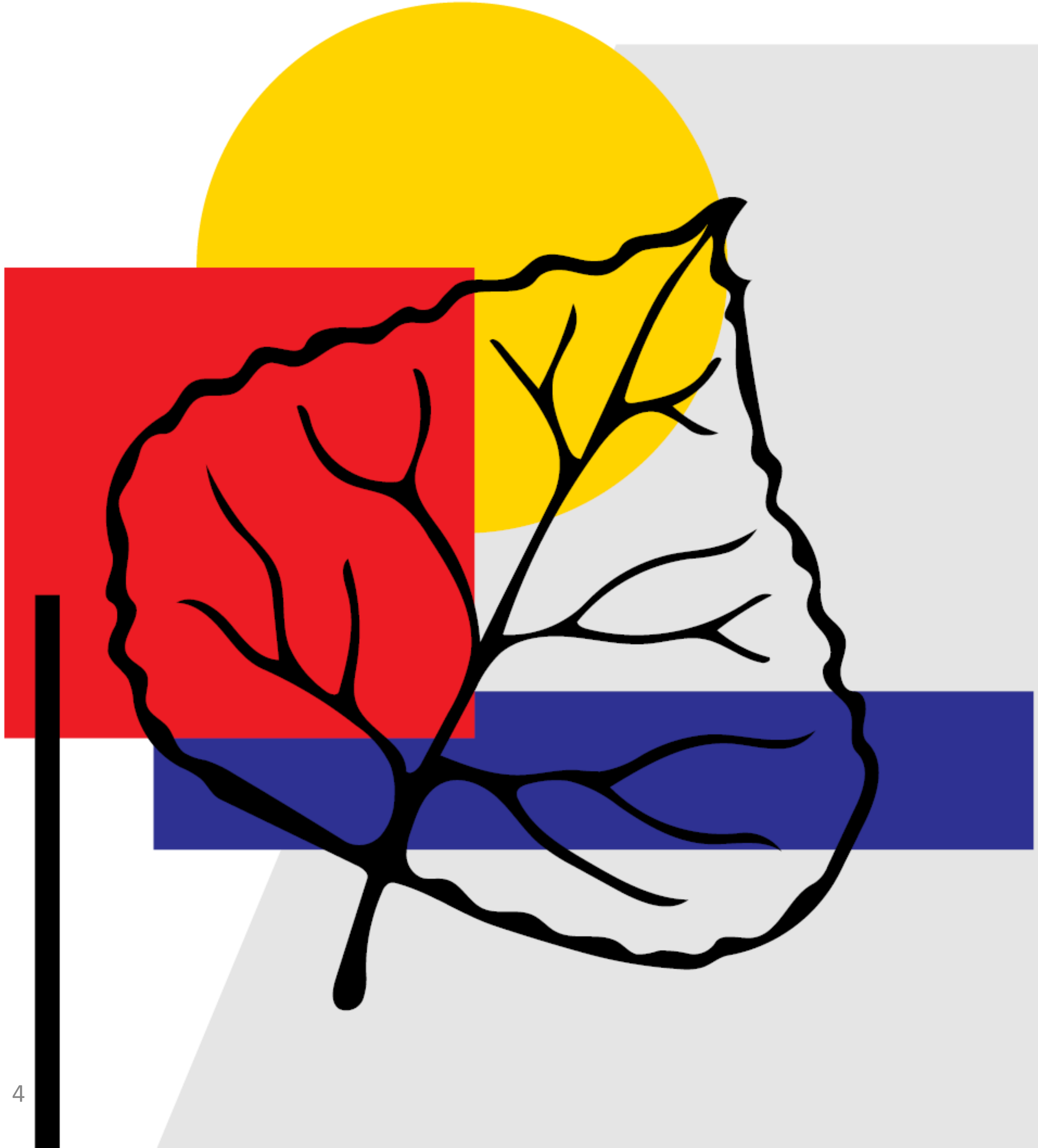
Deliverables by November to Report Back to the Airport Vision Committee

I. Design Aircraft Values Scorecard
- Rank available aircraft to community values and goals

II. Answers to Strategic Questions
- Preferred Design Aircraft, ADG, Green and Carbon Neutral Airfield
- Identify areas of conflict and areas of group alignment

III. Success Factors for TWG
- Community Character Lens

IV. Other Recommendations | Considerations
- Other factors, comments, captured dialogue



Reference Materials

Reference Materials

How do these reference material documents help us guide a discussion and recommendation?

- Aviation Activity Forecasts
- Trends: Rolls Royce Presentation
- Updated Available Aircraft Metrics

Aircraft Metrics & Scorecard

AVC Guiding Principles

- Reduce overall airport emissions (aircraft & facilities) by 20-30% [Target for Overall Airport Emissions]
- Reduce noise levels by 20-30% [Target for Airport Noise Intensity]
- Accommodate limited growth [Airport Commercial Enplanement Target of . 8%]

ASE COMMUNITY VALUES SUMMARY

- Safety in the Air and on the Ground
- Adaptable, Flexible, Future-Proof
- Environmental Responsibility
- Community Character – Reflect local culture and values
- Economic Vitality
- Warm and Welcoming
- Design Excellence
- Efficiency – an airport that works well
- Preserve High Quality of Life
- Convenient and Easy Ground Transportation

ASPEN/PITKIN COUNTY AIRPORT

ASE VISION

Noise

ADG	Manufacturer	Model	Physical Class (Engine)	AAC	Approach Speed (Vref)	Seating	Wingspan (ft.)	Range (NM)	MTOW	ICAO Noise: EPNLdB Noise Level Lateral/Full-Power	ICAO Noise: EPNLdB Noise Level Approach	ICAO Noise: EPNLdB Noise Level Flyover	Noise Score	Operations for 2018 Enplanements
II	Bombardier	CRJ 100/200/440 LR (CL-600-2B19)	Jet	C	140	50	68.67	1,650	53,000	82.4	92.2	77.7		16,452
III	Bombardier	Dash 8 Q400	Turboprop	C	125	76	93.25	1,100	65,200	84.9	94.0	77.8		10,823
III	Airbus	A220-100	Jet	C	130	109	115.08	3,400	134,000	88.0	91.5	78.8		7,547
III	Airbus	A320 NEO Sharklet	Jet	C	136	157	117.45	3,500	174,165	86.4	92.4	80.5		5,876
III	Airbus	A220-300	Jet	C	135	140	115.08	3,350	149,000	87.5	92.4	80.3		5,876
III	Boeing	737-MAX 8	Jet	D	142	178****	117.83	3,550	181,200	88.2	94.0	80.9		4,621
II	Bombardier	CRJ 550 (Same airframe as CRJ-700)	Jet	C	135	50	76.27	1,000	65,000	89.5	92.6	82.4		16,452
II	Bombardier	CRJ 700/701/702 LR	Jet	C	135	70	76.27	1,400	77,000	89.5	92.6	82.4	2	11,751
III	Embraer	E 190 Standard	Jet	C	124	96**	94.25	2,450	105,359	92.2	92.3	82.9		8,569
III	Airbus	A319-100 Sharklet	Jet	C	126	132	117.45	3,750	168,653	91.4	92.9	83.3		6,426
III	Embraer	E 170 Standard	Jet	C	124	69	85.42	2,150	82,012	92.0	94.5	81.3		11,921
III	Embraer	EMB 190-E2	Jet	C	124	97	110.70	2,850	124,341	92.3	92.3	83.8		8,480
III	Airbus	A320-200 Sharklet	Jet	C	136	157	117.45	3,300	171,961	90.9	93.6	84.1		5,484
III	Embraer	EMB 195-E2	Jet	C	124	120	115.15	2,600	135,584	92.3	92.7	84.9		6,855
III	Boeing	737-700 with winglets	Jet	C	130	137	117.42	4,400	154,500	93.1	95.9	83.5		6,528
III	Embraer	EMB 175 LR, extended wingtips	Jet	C	124	76	93.92	2,150	85,517	91.8	95.1	93.0		10,823
III	Mitsubishi	M100 SpaceJet	Jet	C		76	91.30	1,910	86,000	Information not available				10,823
III	Mitsubishi	M90 SpaceJet	Jet	C		88*	95.83	2,040	94,358	Information not available				9,348
III	Embraer	EMB 175-E2	Jet	C	124	80	101.70	2,000	98,767	Information not available				10,282
III	Boeing	737-MAX 7 (same engine as MAX 8)	Jet	D	142	153***	117.83	3,850	177,000	Information not available				5,376

1 = Measurably meets community goals
2 = Generally maintains current condition
3 = Worsens current condition

Notes:

Noise and Emissions Source - ICAO Certification Database, August 2019 | HMMH, August 2019; Per-passenger interpretation - Kimley-Horn August 2019.
Operations 2018 = Actual Enplanements at 70% load factor. Future = 2028 Enplanments at 0.8% Annual Growth and 70% load factor
Aircraft Load and Dimensions from FAA Aircraft Design Characteristics Database OCT 2018
ASE Operational Capability from August 2018 Aircraft Feasibilty analysis done by Alec Seybold - Flight Tech Engineering
Range is nominal stated by manufacturer

* Single-class seating as configured for ANA for use in Japan. Range is 76 to 92
** Dual-class seating per Manufacturer
*** Dual-class range 138 to 153
**** Dual-class range 162 to 178

Emissions

ADG	Manufacturer	Model	Physical Class (Engine)	AAC	Approach Speed (Vref)	Seating	Wingspan (ft.)	Range (NM)	MTOW	ICAO Emissions: Fuel per LTO Cycle (kg) per Passenger	Fuel Compared to CRJ-700	CO2 Total Mass LTO (g) per Passenger	CO2 Compared to CRJ-700	NOx Total Mass LTO (g) per Passenger	NOx Compared to CRJ-700	NOx Takeoff	NOx Climbout	NOx Approach	NOx Idle	NOx Total (All Segments)	Emissions Score
III	Airbus	A220-300	Jet	C	135	140	115.08	3,350	149,000	1.98	59%	14.33	40%	25.08	85%	0.24	0.19	0.10	0.06	0.58	
III	Airbus	A320 NEO Sharklet	Jet	C	136	157	117.45	3,500	174,165	1.99	60%	22.00	62%	19.13	65%	0.16	0.13	0.06	0.03	0.37	
III	Boeing	737-MAX 8	Jet	D	142	178****	117.83	3,550	181,200	1.99	60%	13.52	38%	32.01	108%	0.27	0.13	0.06	0.03	0.48	
III	Airbus	A320-200 Sharklet	Jet	C	136	157	117.45	3,300	171,961	2.57	77%	27.55	77%	31.17	106%	0.16	0.13	0.07	0.04	0.40	
III	Embraer	EMB 195-E2	Jet	C	124	120	115.15	2,600	135,584	2.63	78%	53.83	151%	26.17	89%	0.16	0.13	0.07	0.03	0.39	
III	Airbus	A220-100	Jet	C	130	109	115.08	3,400	134,000	2.71	81%	17.44	49%	36.83	125%	0.17	0.14	0.07	0.03	0.40	
III	Airbus	A319-100 Sharklet	Jet	C	126	132	117.45	3,750	168,653	2.89	86%	39.96	112%	31.07	105%	0.12	0.08	0.06	0.03	0.29	
III	Boeing	737-700 with winglets	Jet	C	130	137	117.42	4,400	154,500	2.99	89%	47.66	134%	32.15	109%	0.15	0.12	0.06	0.03	0.37	
III	Embraer	EMB 175 LR, extended wingtips	Jet	C	124	76	93.92	2,150	85,517	3.23	96%	26.96	76%	30.34	103%	0.20	0.17	0.14	0.06	0.57	
III	Embraer	EMB 190-E2	Jet	C	124	97	110.70	2,850	124,341	3.23	96%	67.14	188%	31.81	108%	0.20	0.17	0.09	0.04	0.49	
III	Embraer	E 190 Standard	Jet	C	124	96**	94.25	2,450	105,359	3.24	97%	68.39	192%	31.59	107%	0.20	0.17	0.09	0.04	0.49	
II	Bombardier	CRJ 100/200/440 LR (CL-600-2B19)	Jet	C	140	50	68.67	1,650	53,000	3.34	100%	67.00	188%	22.74	77%	0.23	0.20	0.14	0.08	0.65	
II	Bombardier	CRJ 700/701/702 LR	Jet	C	135	70	76.27	1,400	77,000	3.35	100%	35.62	100%	29.50	100%	0.20	0.18	0.15	0.06	0.60	2
III	Embraer	E 170 Standard	Jet	C	124	69	85.42	2,150	82,012	3.57	107%	29.65	83%	33.63	114%	0.22	0.19	0.16	0.07	0.63	
II	Bombardier	CRJ 550 (Same airframe as CRJ-700)	Jet	C	135	50	76.27	1,000	65,000	4.69	140%	49.87	140%	41.30	140%	0.29	0.25	0.22	0.09	0.84	
III	Mitsubishi	M100 SpaceJet	Jet	C		76	91.30	1,910	86,000					Information not available							
III	Mitsubishi	M90 SpaceJet	Jet	C		88*	95.83	2,040	94,358					Information not available							
III	Embraer	EMB 175-E2	Jet	C	124	80	101.70	2,000	98,767					Information not available							
III	Boeing	737-MAX 7 (same engine as MAX 8)	Jet	D	142	153***	117.83	3,850	177,000					Information not available							
III	Bombardier	Dash 8 Q400	Turboprop	C	125	76	93.25	1,100	65,200					Information not available							

1 = Measurably meets community g
2 = Generally maintains current con
3 = Worsens current condition

Notes:

Noise and Emissions Source - ICAO Certification Database, August 2019 | HMMH, August 2019; Per-passenger interpretation - Kimley-Horn August 2019.
Operations 2018 = Actual Enplanements at 70% load factor. Future = 2028 Enplanments at 0.8% Annual Growth and 70% load factor
Aircraft Load and Dimensions from FAA Aircraft Design Characteristics Database OCT 2018
ASE Operational Capability from August 2018 Aircraft Feasibilty analysis done by Alec Seybold - Flight Tech Engineering
Range is nominal stated by manufacturer

* Single-class seating as configured for ANA for use in Japan. Range is 76 to 92
** Dual-class seating per Manufacturer
*** Dual-class range 138 to 153
**** Dual-class range 162 to 178

Ability to Safely Operate at ASE

ADG	Manufacturer	Model	Physical Class (Engine)	AAC	Approach Speed (Vref)	Seating	Wingspan (ft.)	Range (NM)	MTOW	ASE Operational Capability			ASE Operation Capability Score
										ASE Missed Approach Capable? Winter	ASE Missed Approach Capable? Summer	Significant Wt Penalty at ASE?	
II	Bombardier	CRJ 550 (Same airframe as CRJ-700)	Jet	C	135	50	76.27	1,000	65,000	Y	Y	N	
III	Airbus	A220-100	Jet	C	130	109	115.08	3,400	134,000	Y	Y	N	
III	Boeing	737-MAX 7 (same engine as MAX 8)	Jet	D	142	153***	117.83	3,850	177,000	Y	Y	N	
III	Airbus	A319-100 Sharklet	Jet	C	126	132	117.45	3,750	168,653	Y	Y	N	
III	Bombardier	Dash 8 Q400	Turboprop	C	125	76	93.25	1,100	65,200	Y	Y	N	
II	Bombardier	CRJ 700/701/702 LR	Jet	C	135	70	76.27	1,400	77,000	Y	Y	Y	2
III	Embraer	EMB 175 LR, extended wingtips	Jet	C	124	76	93.92	2,150	85,517	Y	Marginal	Y	
III	Boeing	737-700 with winglets	Jet	C	130	137	117.42	4,400	154,500	Y	Marginal	Y	
III	Boeing	737-MAX 8	Jet	D	142	178****	117.83	3,550	181,200	Y	Marginal	Y	
II	Bombardier	CRJ 100/200/440 LR (CL-600-2B19)	Jet	C	140	50	68.67	1,650	53,000	Charter	N	Y	
III	Airbus	A220-300	Jet	C	135	140	115.08	3,350	149,000	Unknown	Unknown	Unknown	
III	Mitsubishi	M100 SpaceJet	Jet	C		76	91.30	1,910	86,000	Unknown	Unknown	Unknown	
III	Mitsubishi	M90 SpaceJet	Jet	C		88*	95.83	2,040	94,358	Unknown	Unknown	Unknown	
III	Embraer	EMB 175-E2	Jet	C	124	80	101.70	2,000	98,767	Unknown	Unknown	Unknown	
III	Embraer	EMB 195-E2	Jet	C	124	120	115.15	2,600	135,584	Unknown	Unknown	Unknown	
III	Embraer	E 170 Standard	Jet	C	124	69	85.42	2,150	82,012	Unknown	Unknown	Unknown	
III	Embraer	E 190 Standard	Jet	C	124	96**	94.25	2,450	105,359	Unknown	Unknown	Unknown	
III	Embraer	EMB 190-E2	Jet	C	124	97	110.70	2,850	124,341	Unknown	Unknown	Unknown	
III	Airbus	A320 NEO Sharklet	Jet	C	136	157	117.45	3,500	174,165	Unknown	Unknown	Unknown	
III	Airbus	A320-200 Sharklet	Jet	C	136	157	117.45	3,300	171,961	Unknown	Unknown	Unknown	

1 = Measurably meets community goals
2 = Generally maintains current condition
3 = Worsens current condition

Notes:

Noise and Emissions Source - ICAO Certification Database, August 2019 | HMMH, August 2019; Per-passenger interpretation - Kimley-Horn August 2019.
Operations 2018 = Actual Enplanements at 70% load factor. Future = 2028 Enplanments at 0.8% Annual Growth and 70% load factor
Aircraft Load and Dimensions from FAA Aircraft Design Characteristics Database OCT 2018
ASE Operational Capability from August 2018 Aircraft Feasibilty analysis done by Alec Seybold - Flight Tech Engineering
Range is nominal stated by manufacturer

* Single-class seating as configured for ANA for use in Japan. Range is 76 to 92
** Dual-class seating per Manufacturer
*** Dual-class range 138 to 153
**** Dual-class range 162 to 178

Ability to Limit Operations Growth

ADG	Manufacturer	Model	Physical Class (Engine)	AAC	Approach Speed (V_{ref})	Seating	Wingspan (ft.)	Range (NM)	MTOW	Operations Data		Ability to limit Operations Score
										Annual Ops 2018	Annual Ops Future	
III	Boeing	737-MAX 8	Jet	D	142	178****	117.83	3,550	181,200	4,621	5,005	
III	Boeing	737-MAX 7 (same engine as MAX 8)	Jet	D	142	153***	117.83	3,850	177,000	5,376	5,822	
III	Airbus	A320-200 Sharklet	Jet	C	136	157	117.45	3,300	171,961	5,484	5,939	
III	Airbus	A220-300	Jet	C	135	140	115.08	3,350	149,000	5,876	6,363	
III	Airbus	A320 NEO Sharklet	Jet	C	136	157	117.45	3,500	174,165	5,876	6,363	
III	Airbus	A319-100 Sharklet	Jet	C	126	132	117.45	3,750	168,653	6,426	6,959	
III	Boeing	737-700 with winglets	Jet	C	130	137	117.42	4,400	154,500	6,528	7,070	
III	Embraer	EMB 195-E2	Jet	C	124	120	115.15	2,600	135,584	6,855	7,423	
III	Airbus	A220-100	Jet	C	130	109	115.08	3,400	134,000	7,547	8,173	
III	Embraer	EMB 190-E2	Jet	C	124	97	110.70	2,850	124,341	8,480	9,184	
III	Embraer	E 190 Standard	Jet	C	124	96**	94.25	2,450	105,359	8,569	9,279	
III	Mitsubishi	M90 SpaceJet	Jet	C		88*	95.83	2,040	94,358	9,348	10,123	
III	Embraer	EMB 175-E2	Jet	C	124	80	101.70	2,000	98,767	10,282	11,135	
III	Mitsubishi	M100 SpaceJet	Jet	C		76	91.30	1,910	86,000	10,823	11,721	
III	Embraer	EMB 175 LR, extended wingtips	Jet	C	124	76	93.92	2,150	85,517	10,823	11,721	
III	Bombardier	Dash 8 Q400	Turboprop	C	125	76	93.25	1,100	65,200	10,823	11,721	
II	Bombardier	CRJ 700/701/702 LR	Jet	C	135	70	76.27	1,400	77,000	11,751	12,726	2
III	Embraer	E 170 Standard	Jet	C	124	69	85.42	2,150	82,012	11,921	12,910	
II	Bombardier	CRJ 100/200/440 LR (CL-600-2B19)	Jet	C	140	50	68.67	1,650	53,000	16,452	17,816	
II	Bombardier	CRJ 550 (Same airframe as CRJ-700)	Jet	C	135	50	76.27	1,000	65,000	16,452	17,816	

1 = Measurably meets community goals
2 = Generally maintains current condition
3 = Worsens current condition

Notes:

Noise and Emissions Source - ICAO Certification Database, August 2019 | HMMH, August 2019; Per-passenger interpretation - Kimley-Horn August 2019.
Operations 2018 = Actual Enplanements at 70% load factor. Future = 2028 Enplanments at 0.8% Annual Growth and 70% load factor
Aircraft Load and Dimensions from FAA Aircraft Design Characteristics Database OCT 2018
ASE Operational Capability from August 2018 Aircraft Feasibilty analysis done by Alec Seybold - Flight Tech Engineering
Range is nominal stated by manufacturer

* Single-class seating as configured for ANA for use in Japan. Range is 76 to 92
** Dual-class seating per Manufacturer
*** Dual-class range 138 to 153
**** Dual-class range 162 to 178

Linda Perry, LeighFisher

FAA Forecast Approach

FAA Design Aircraft

Aspen Drivers of the Design Aircraft

ASE Aviation Activity Forecasts

Forecast Approach for ASE

The key elements, decisions and input for preparing forecasts for planning

1. Local Data Collection
- ➢Roaring Fork Valley population of 84,200
- ➢Pitkin County peak population of 33,800 to 53,100
- ➢Peak overnight visitor capacity of approximately 20,000

2. Prepare Analysis
- ➢Historical passenger growth trend of 2.0% per year between 2000 and 2018
- ➢Peak winter season accounts for more than half of annual passengers
- ➢Service to airline connecting hubs

3. ASE's Role
- ➢ Destination airport for visitors
- ➢ Origin airport for residents
- ➢ Spoke in airline networks

4. Define Key Drivers of Aviation Activity

5. Prepare Annual Forecasts
- ➢Enplaned passengers
- ➢Air cargo

6. Translate Annual Forecasts into Aircraft Operations
- ➢Enplaned passenger load factor
- ➢Average seats per departure
- ➢Enplaned cargo per departure
- ➢Aircraft fleet mix

We are here

7. Obtain FAA Approval

8. Prepare Derivative Forecasts

ASPEN/PITKIN COUNTY AIRPORT

ASE VISION

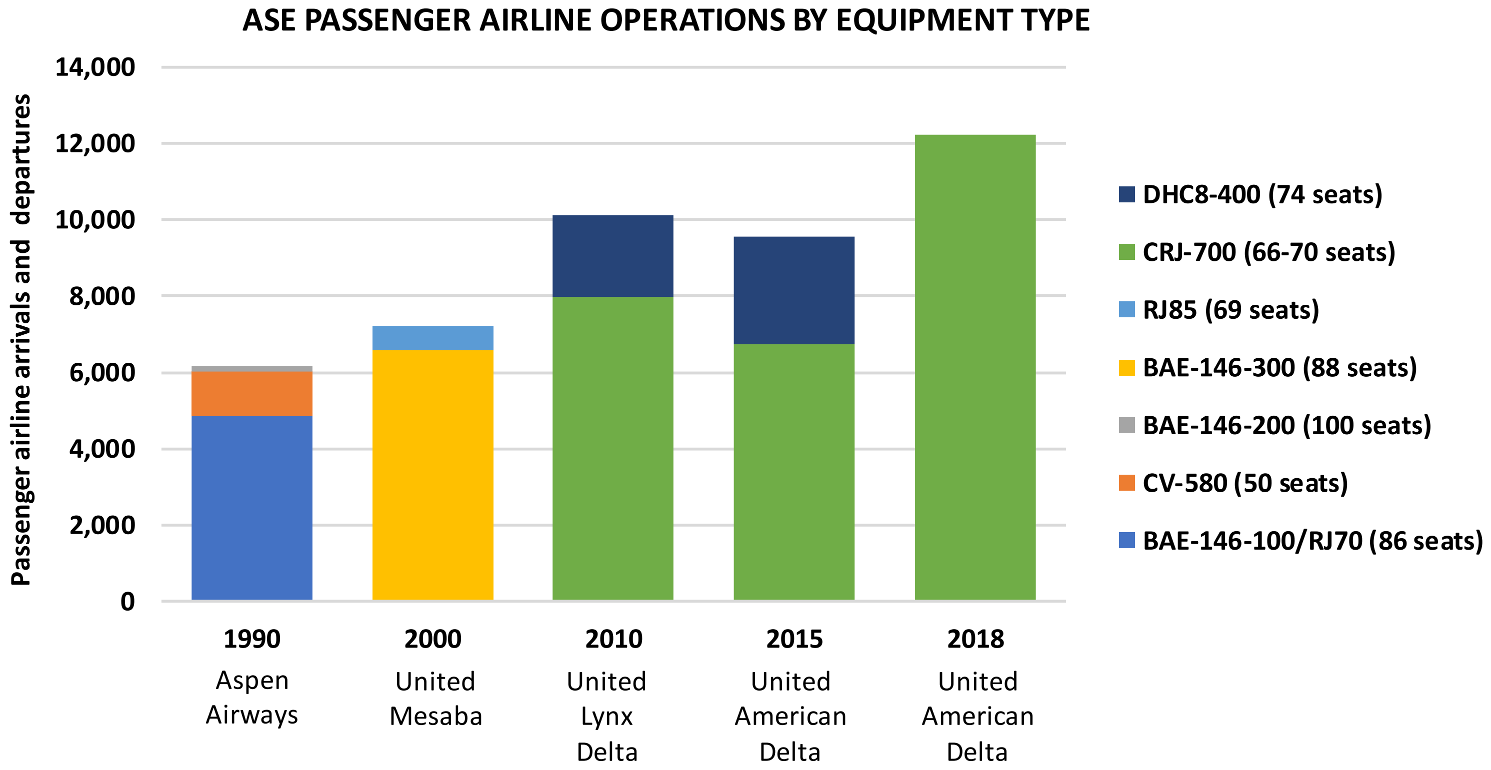
FAA Design Aircraft

What is a FAA Design Aircraft?

FAA Definition

"The critical aircraft is the **most demanding aircraft type**, or grouping of aircraft with similar characteristics, that make regular use of the airport. **Regular use is 500 annual operations**, including both itinerant and local operations but excluding touch-and-go operations. An operation is either a takeoff or landing."

Over time, ASE's Design Aircraft has changed with changes in airline fleets and service



Note: The terms Critical Aircraft, Design Aircraft, and Critical Design Aircraft are synonymous.

Sources: Federal Aviation Administration, Advisory Circular 150/5000-17, Critical Aircraft and Regular Use Determination, June 20, 2017, www.faa.gov. U.S. Department of Transportation, Schedule T100, online database, accessed September 2019.

ASPEN/PITKIN COUNTY AIRPORT

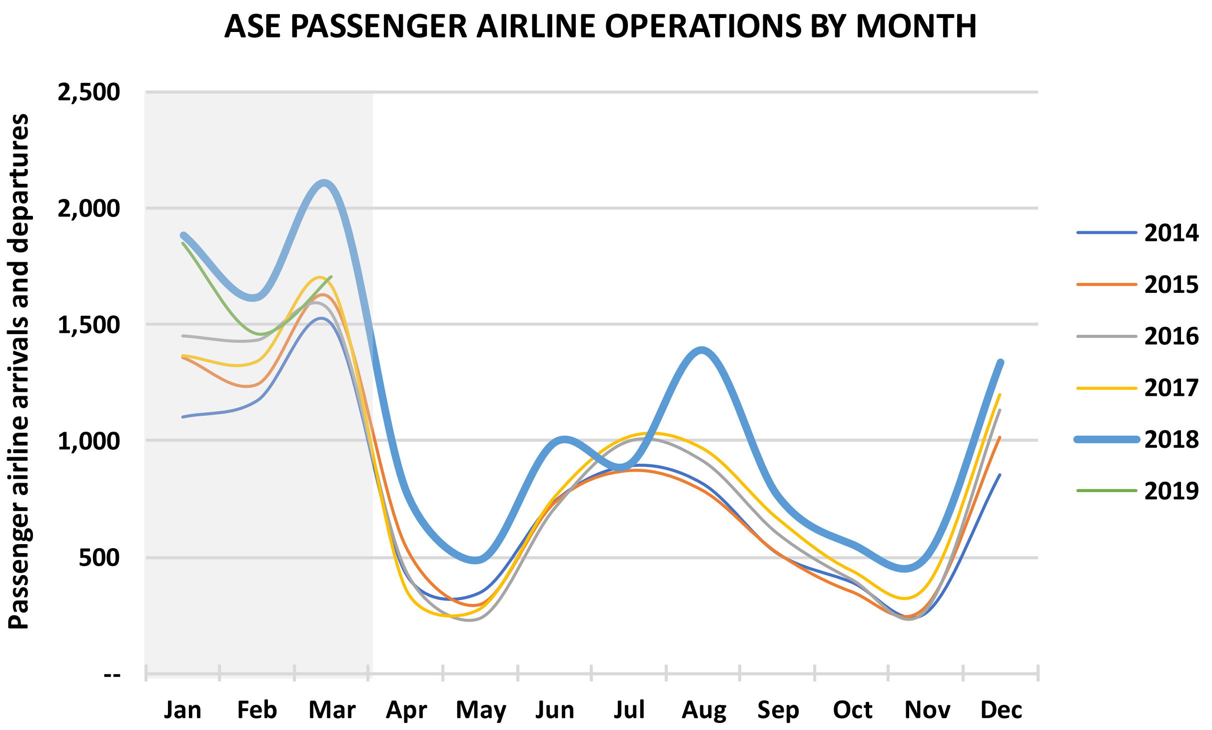
ASE VISION

What Factors are Involved in the Critical FAA Aircraft Determination?

FAA Answer

"The existing Critical Aircraft determination **requires documenting regular use of airport facilities**. Documenting aeronautical activity may reflect specific seasonal operational characteristics of an airport (i.e., seasonal scheduled passenger service). Therefore, **operations do not need to occur uniformly throughout a 12-month period**."

More than 40% of ASE's passenger airline operations occur in January through March



Note: The terms Critical Aircraft, Design Aircraft, and Critical Design Aircraft are synonymous.

Sources: Federal Aviation Administration, Advisory Circular 150/5000-17, Critical Aircraft and Regular Use Determination, June 20, 2017, www.faa.gov. U.S. Department of Transportation, Schedule T100, online database, accessed September 2019.

ASPEN/PITKIN COUNTY AIRPORT

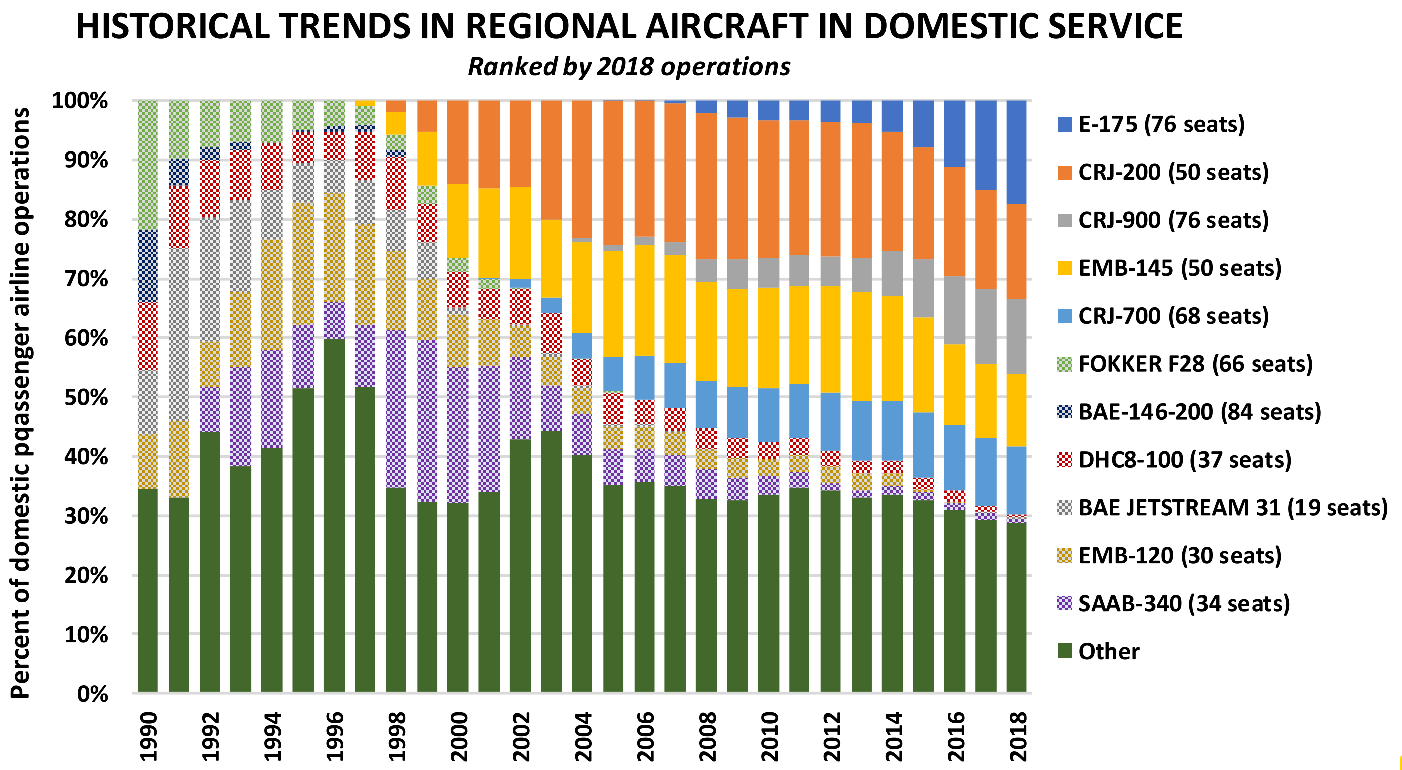
ASE VISION

What is the Distinction between the Existing versus Future FAA Design Aircraft?

FAA Answer

"The future Critical Aircraft is determined with **an FAA-approved forecast** that considers **aircraft "highly likely" or "expected" to regularly use the airport**…The future Critical Aircraft will often be different than the existing Critical Aircraft, given operational growth, the retirement of older aircraft types, and the introduction of new aircraft into service."

Given recent trends, it's highly likely that the E175 will account for an increasing share of total domestic operations



Note: The terms Critical Aircraft, Design Aircraft, and Critical Design Aircraft are synonymous.

Sources: Federal Aviation Administration, Advisory Circular 150/5000-17, Critical Aircraft and Regular Use Determination, June 20, 2017, www.faa.gov. U.S. Department of Transportation, Schedule T100, online database, accessed September 2019.

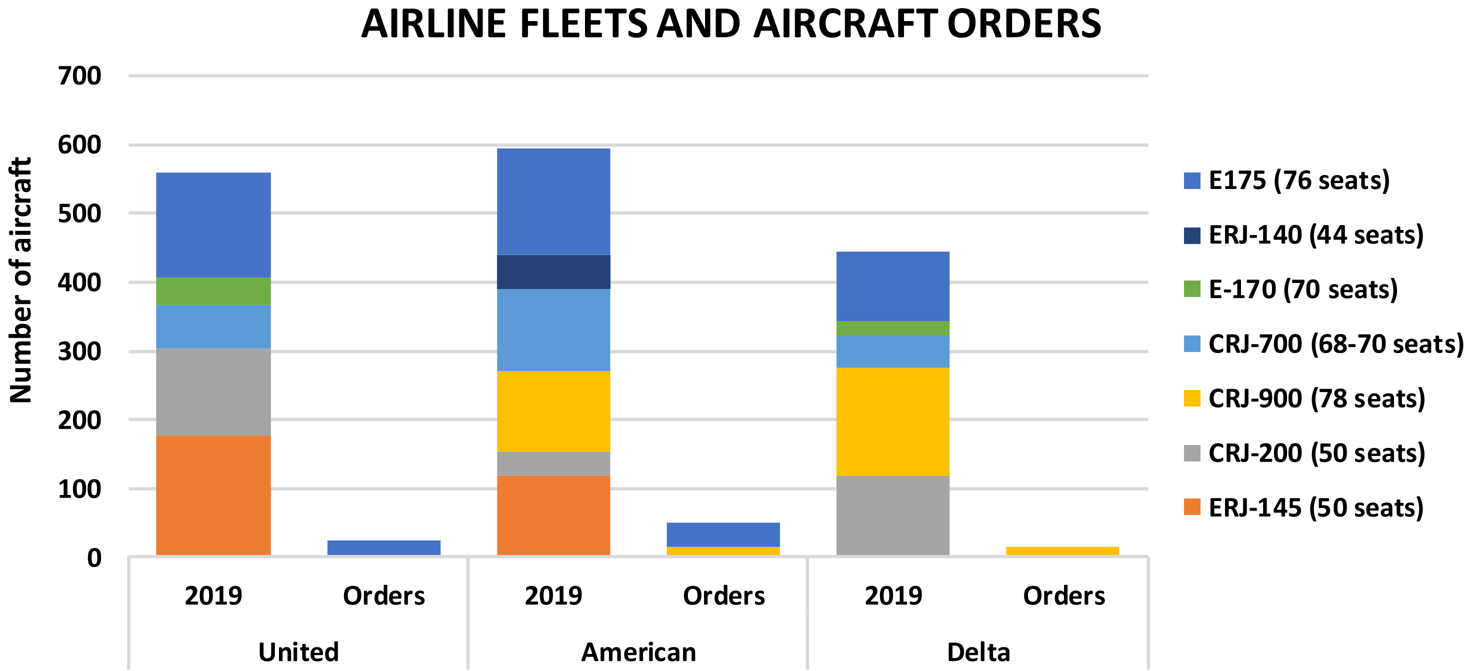
ASPEN/PITKIN COUNTY AIRPORT ASE VISION

How is a Future FAA Critical Aircraft Determination Made?

FAA Answer

"The determination of a future Critical Aircraft is based on **an FAA approval of the airport sponsor's forecast**. Proper diligence and awareness of **aircraft fleet trends** is needed when establishing the future Critical Aircraft…"

The E175 accounted for 25% of the combined regional aircraft fleets of United, American, and Delta in 2019



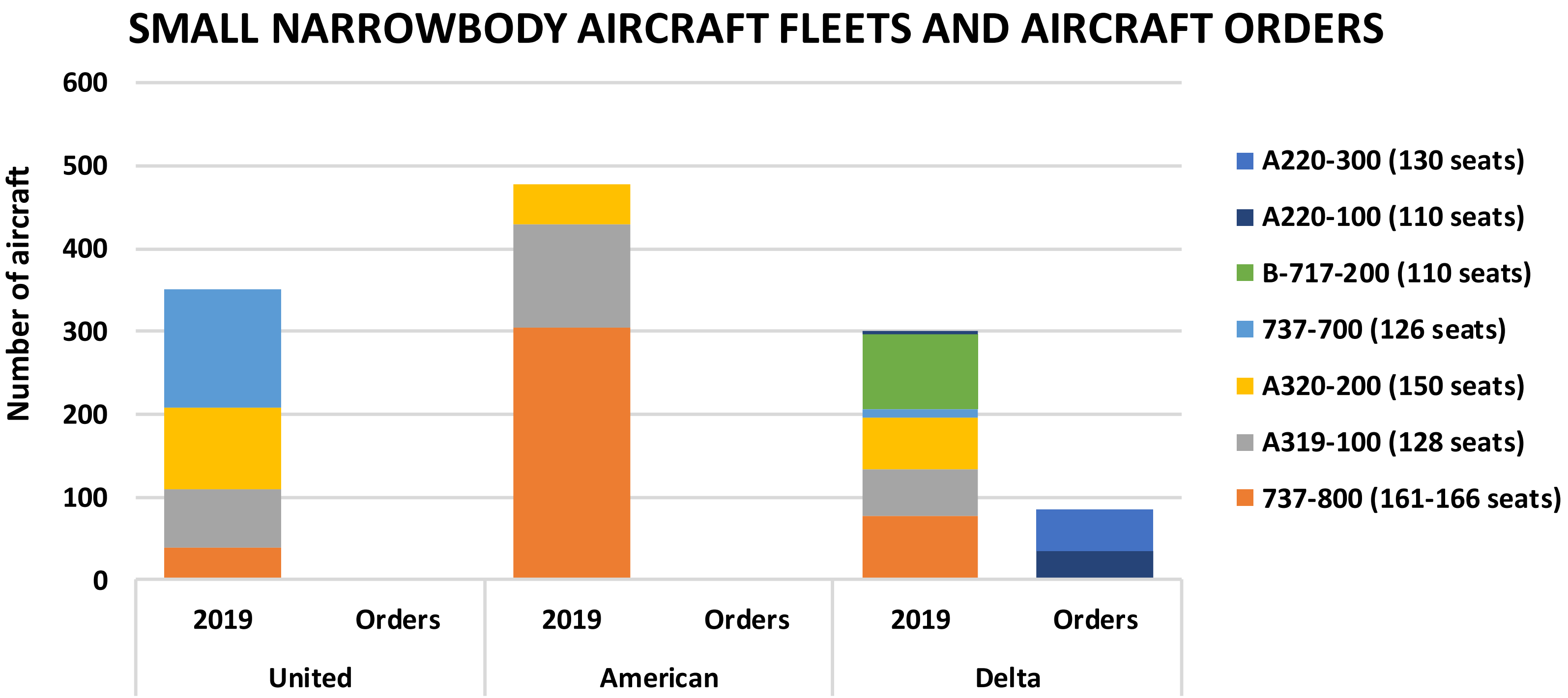
Note: The terms Critical Aircraft, Design Aircraft, and Critical Design Aircraft are synonymous.

Sources: Federal Aviation Administration, Advisory Circular 150/5000-17, Critical Aircraft and Regular Use Determination, June 20, 2017, www.faa.gov. U.S. Department of Transportation, Schedule T100, online database, accessed September 2019.

Small Narrowbody National Aircraft Trends

Airlines such as Delta are incorporating small narrowbody aircraft into their fleets to:

- Bridge the gap between the largest capacity regional aircraft (e.g., E-175 with 76 seats) and the newest narrowbody aircraft (e.g., B737-900 with 179 seats)
- Serve fast growing regional markets
- Replace aging small narrowbody aircraft such as the A319



Note: The terms Critical Aircraft, Design Aircraft, and Critical Design Aircraft are synonymous.

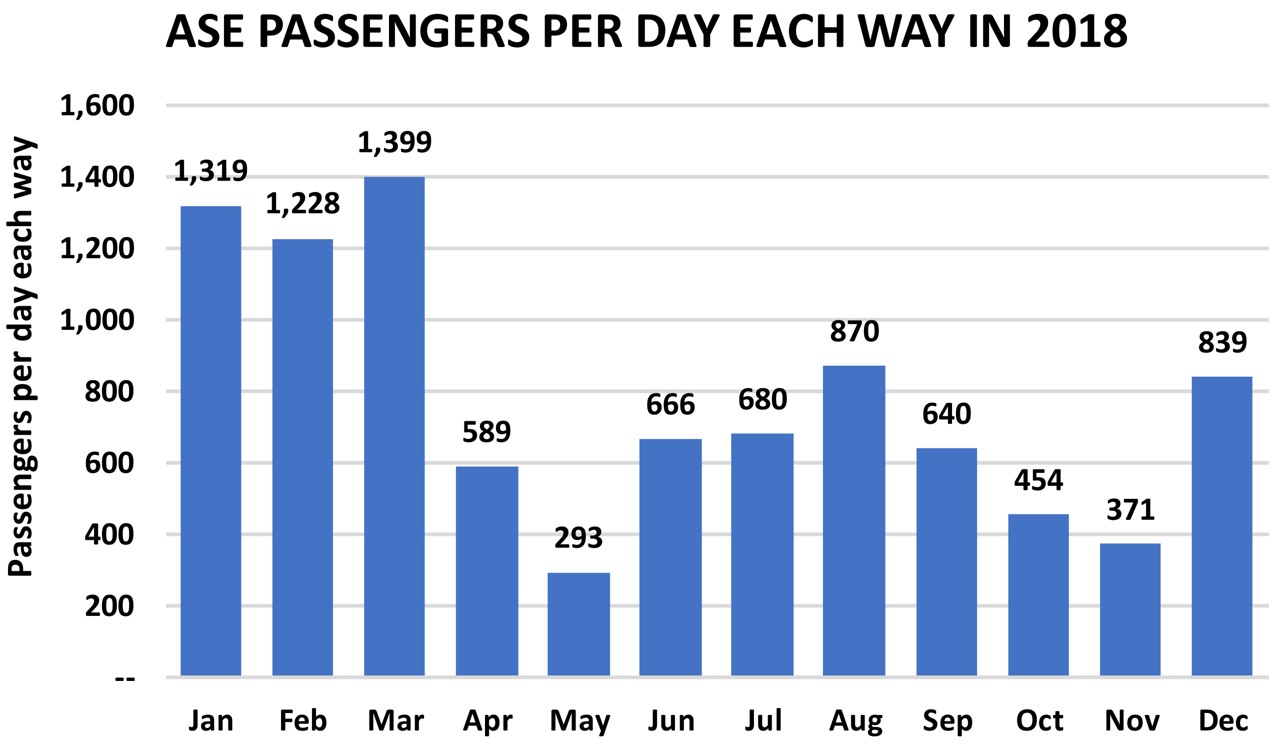
Sources: Federal Aviation Administration, Advisory Circular 150/5000-17, Critical Aircraft and Regular Use Determination, June 20, 2017, www.faa.gov. U.S. Department of Transportation, Schedule T100, online database, accessed September 2019.

Aspen Drivers of the Design Aircraft

What factors will influence the Design Aircraft for ASE?

- Annual Operations (regular use = 500 operations per year)
- Airlines serving ASE
- Airline aircraft fleets and aircraft orders
- Passenger base
- Seasonality of passenger traffic

The number of passengers per day each way during the peak season is more than twice that for the rest of the year



Note: The terms Critical Aircraft, Design Aircraft, and Critical Design Aircraft are synonymous.

Sources: Federal Aviation Administration, Advisory Circular 150/5000-17, Critical Aircraft and Regular Use Determination, June 20, 2017, www.faa.gov. U.S. Department of Transportation, Schedule T100, online database, accessed September 2019.

ASPEN/PITKIN COUNTY AIRPORT

ASE VISION

ASE Passenger Base and Seasonality: 2018

Month	Passengers per day each way 2018	Derived average daily departures based on seat configuration and 70% load factor			
		76 seats	100 seats	125 seats	150 seats
Jan	1,319	25	19	15	13
Feb	1,228	23	18	14	12
Mar	1,399	26	20	16	13
Apr	589	11	8	7	6
May	293	6	4	3	3
Jun	666	13	10	8	6
Jul	680	13	10	8	6
Aug	870	16	12	10	8
Sep	640	12	9	7	6
Oct	454	9	6	5	4
Nov	371	7	5	4	4
Dec	839	16	12	10	8
Total	**9,349**	**176**	**134**	**107**	**89**

- Larger capacity aircraft translate into fewer departures
- Off season months such as May can't support large narrowbody service due to service by three airlines to three markets
- Peak season months can support limited small narrowbody service to certain markets

Note: The terms Critical Aircraft, Design Aircraft, and Critical Design Aircraft are synonymous.

Sources: Federal Aviation Administration, Advisory Circular 150/5000-17, Critical Aircraft and Regular Use Determination, June 20, 2017, www.faa.gov. U.S. Department of Transportation, Schedule T100, online database, accessed September 2019.

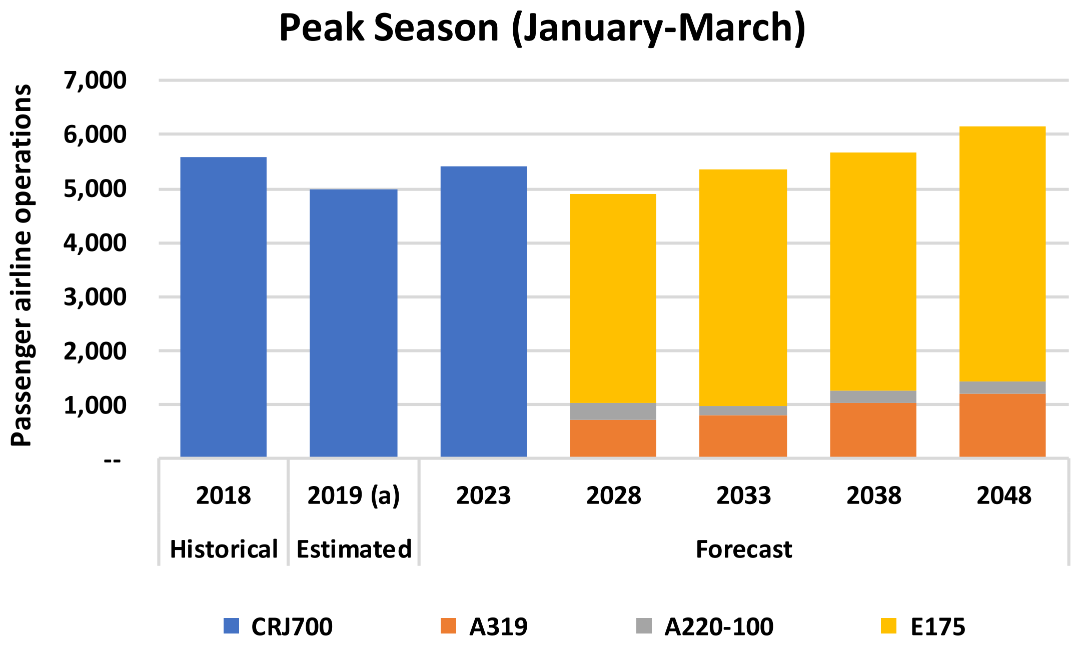
ASPEN/PITKIN COUNTY AIRPORT

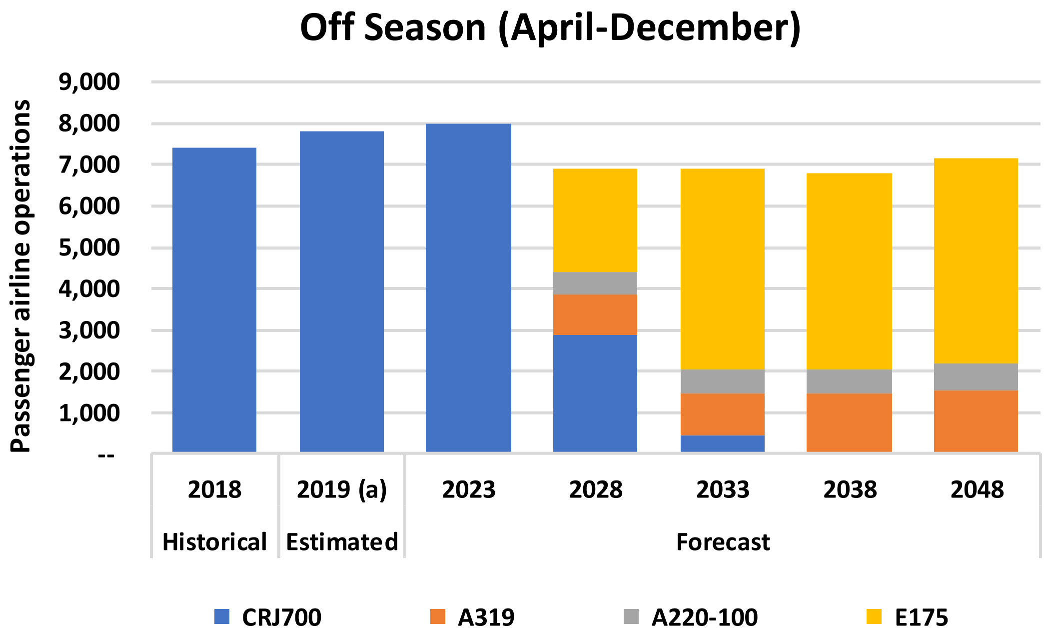
ASE VISION

FAA Activity Forecasts for ASE

FAA Forecasts of ASE Passenger Airline Operations by Equipment Type

- *Stronger growth is forecast for peak season operations than off season*
- *Peak season activity levels support the increasing use of small narrowbody aircraft*
- *The CRJ700 aircraft remains in service longer during the off season*



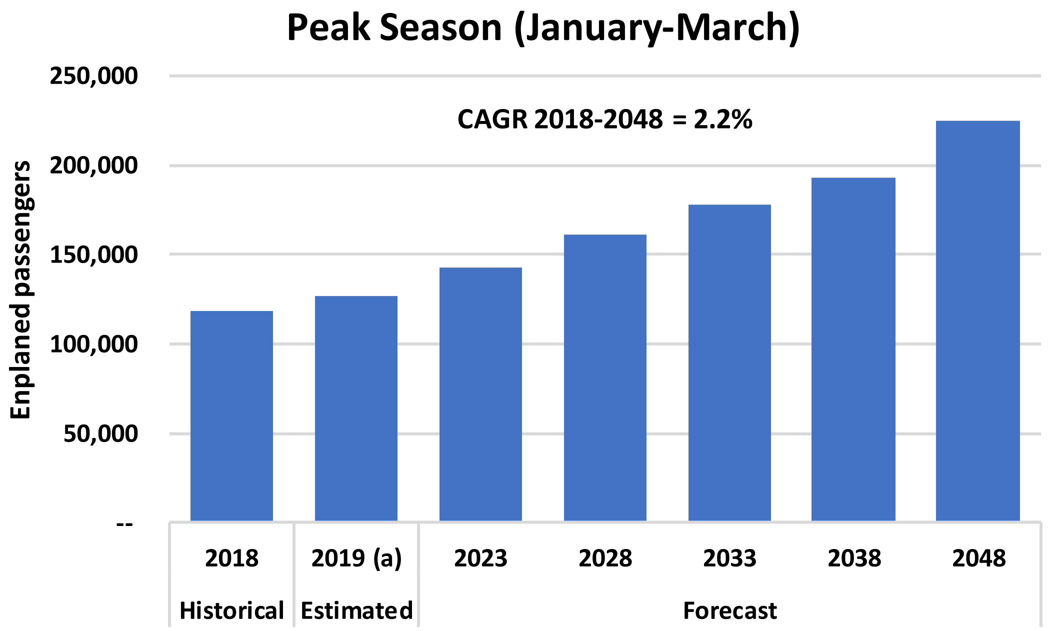


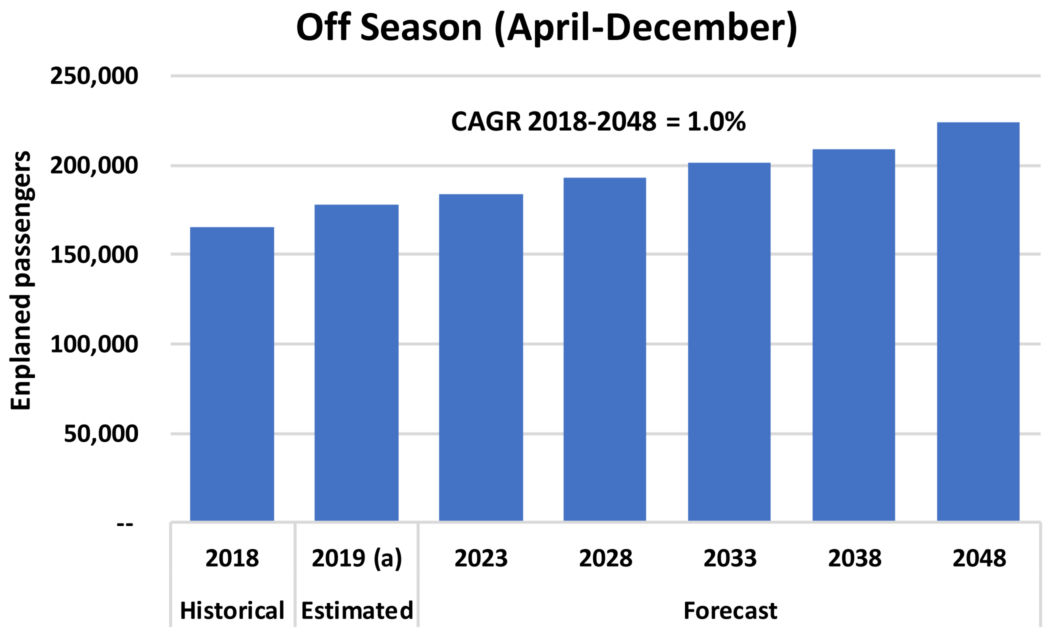
Sources: Historical—U.S. Department of Transportation, Schedule T100, online database, accessed September 2019.
Forecast—LeighFisher, June 2019.

ASPEN/PITKIN COUNTY AIRPORT
ASE VISION

FAA Unconstrained Forecasts of ASE Enplaned Passengers

ASE enplaned passengers are forecast to increase an average of 1.5% per year, with stronger growth during the peak season

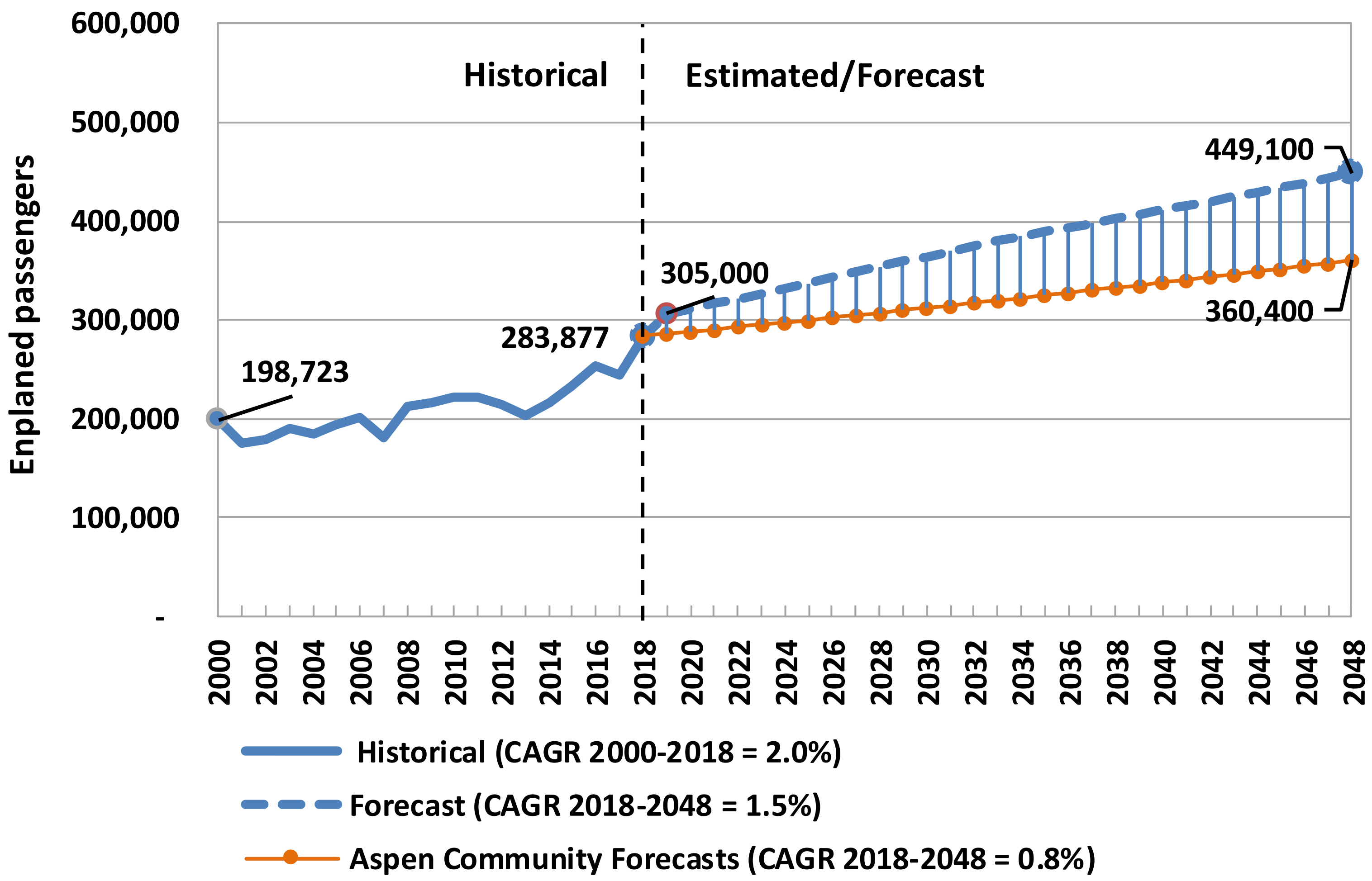




CAGR = Compound annual growth rate
Sources: Historical—U.S. Department of Transportation, Schedule T100, online database, accessed September 2019.
Forecast—LeighFisher, June 2019.

ASPEN/PITKIN COUNTY AIRPORT
ASE VISION

Unconstrained Forecast vs. Aspen Community Forecast



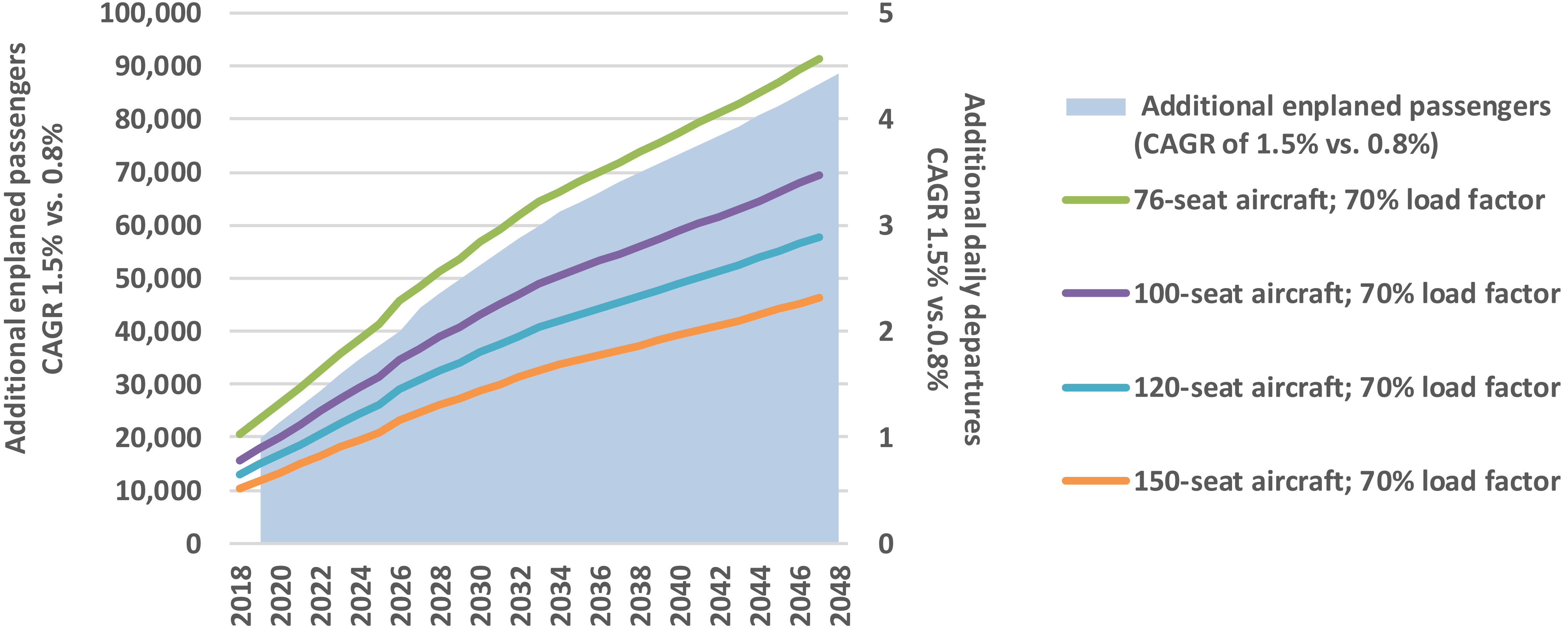
- **Historical:** Gain of 85,000 enplaned passengers between 2000 and 2018 (2.0% CAGR)
- **Estimated:** Gain of 106,000 passengers between 2000 and 2019 (2.3% CAGR)
- **Unconstrained Forecast:** Gain of 165,000 passengers between 2018 and 2048 (1.5% CAGR)
- **Aspen Community Forecast:** Gain of 76,500 passengers between 2018 and 2048 (0.8% CAGR)

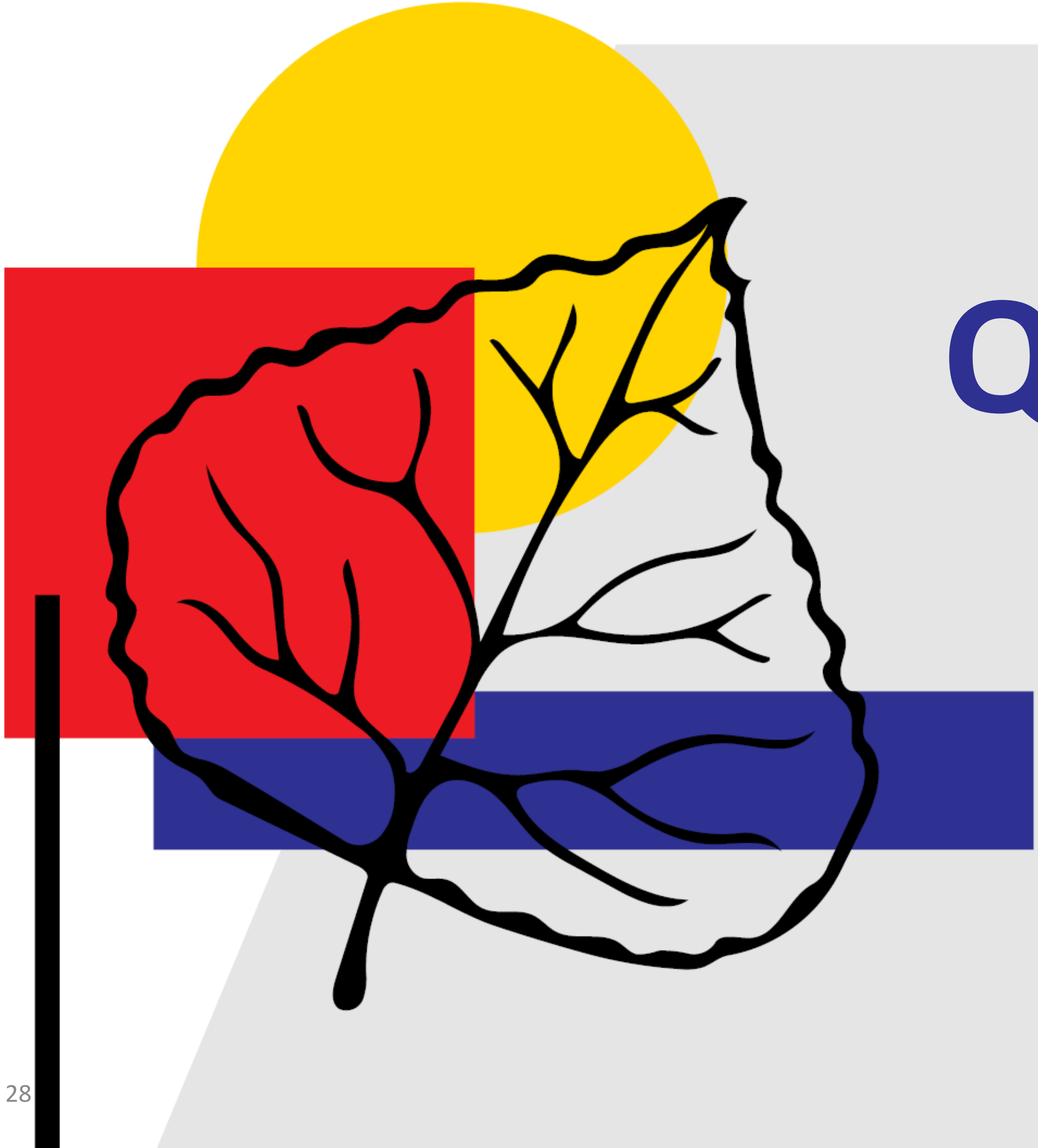
ASPEN/PITKIN COUNTY AIRPORT

ASE VISION

Unconstrained Forecast vs. Aspen Community Forecast Additional Passengers and Daily Departures

Depending on the aircraft type, the additional enplaned passengers in the unconstrained forecast can be served with as few as 1 to 2 departures





Questions and Comments

Lighting Round and Discussion

Next Steps

Meeting Schedule

Meeting III Diving Deep Part II → Meeting IV Airfield → Meeting V Report

Meeting 3 - Diving Deep Part 2: Aircraft Noise and Emissions
October 2nd Aspen Meadows, Doerr-Hoiser, 4 – 7pm

Meeting 4 - Aspen Airfield: Airport Design 101, Non-Standard Conditions, Green and Carbon Neutral Goals
October 16th, Pitkin County Building, Roaring Fork Room, 4 – 7

Meeting 5 – Report: Finalize and Refine Recommendations
October 23rd, Aspen Police Department Building Meeting Room, 4 - 7 pm

ASPEN/PITKIN COUNTY AIRPORT

ASE VISION

Thank You

Are we missing anything?