

Trans Air Systems

Family of Convertible Payload Transport Aircraft

*** CPTA 200 ***

CPTA XTOL

CPTA 3000

Round 1 Funding

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Our Vision

Trans Air Systems is developing a disruptive family of dedicated air-cargo aircraft that are dramatically more effective than any previous cargo plane in terms of fuel efficiency, operational efficiency (unprecedented roll-on and roll-off loading and unloading), and field access capabilities. Ours will be the first ever with the ability to transport individual 40 ft. ISO intermodal shipping-containers. Our CPTA XTOL variant has the unique ability to operate from virtually any relatively flat surface on the planet, enabling container delivery to regions with poor or even no infrastructure at all.





The Problem



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-Current aircraft cannot handle 40ft. ISO intermodal shipping-containers.

-High fuel consumption of older air-cargo aircraft.

-Container deliveries cannot be made to regions with poor infrastructure.

-C-130 aircraft are of an obsolete 65-year old design and need to be retired.



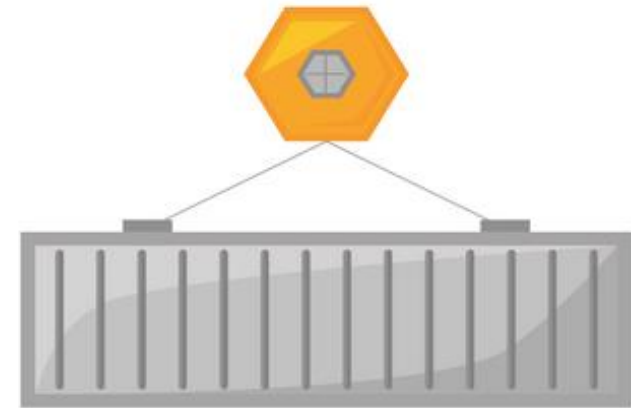
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Current Solutions



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Lockheed C-130s can carry two 20x8x8 ft containers. This aircraft was developed some 10 years before ISO shipping containers became standardized in the mid 1970's. Hence the awkward and time consuming loading and unloading process



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Current Solution	Major Issues
C-130 and variants	40 ft. ISO won't fit, fuel efficiency, long loading time, long runways
Boeing 757	40 ft. ISO won't fit, fuel efficiency, long loading time, long runways
Beluga	Fuel efficiency, requires long runways
Trucks	Slow, limited access to remote areas
Ships	Slow, coastal delivery only

C-130J



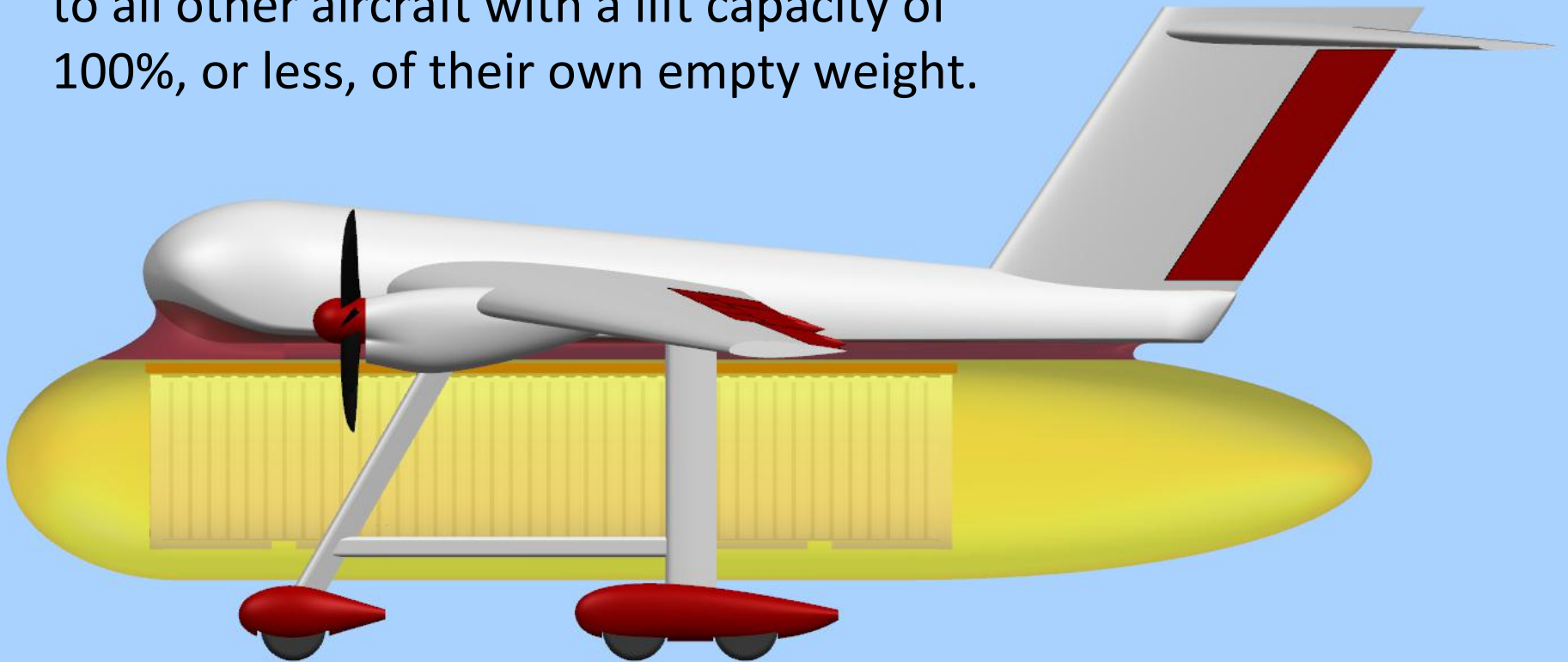


Our Aircraft

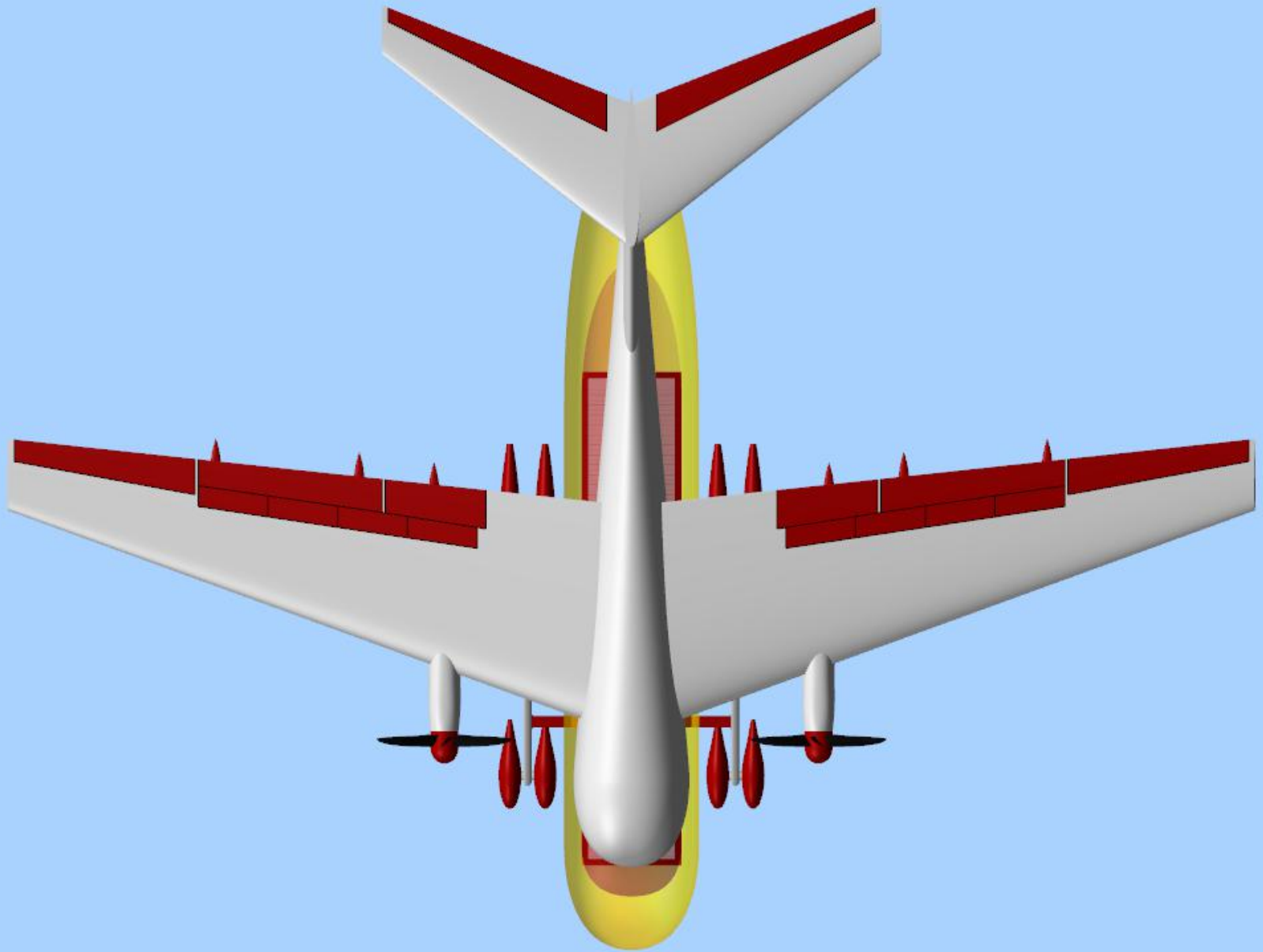


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We have eliminated the traditional fuselage and reallocated its weight to the payload. This results in an aircraft that can lift more than five times its own weight as opposed to all other aircraft with a lift capacity of 100%, or less, of their own empty weight.

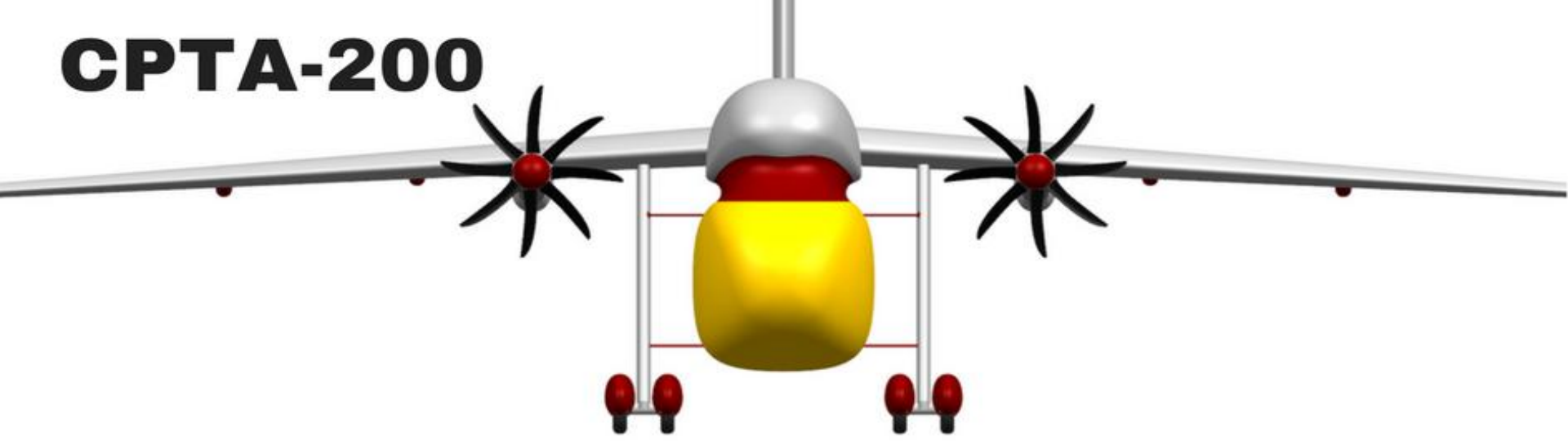


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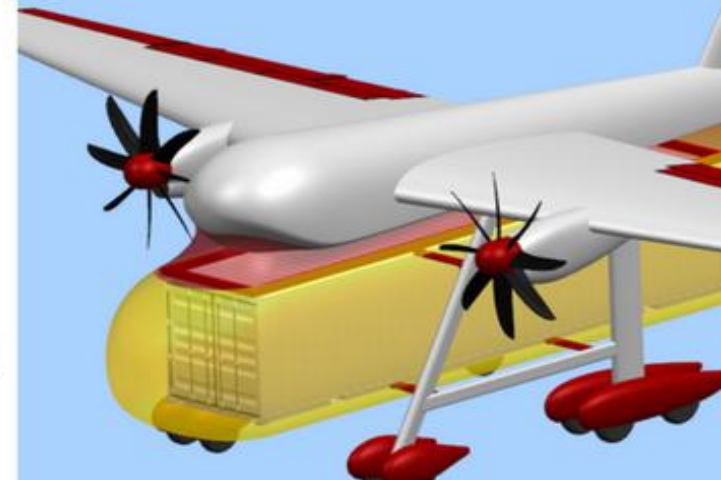
CPTA-200



- USES UP TO 53.5% LESS FUEL PER PAYLOAD TON-MILE THAN THE COMPARISON AIRCRAFT C130J-30.

- REGIONAL AIRCRAFT WITH AN AVERAGE TRAVEL DISTANCE OF UP TO 2000 NAUTICAL MILES.

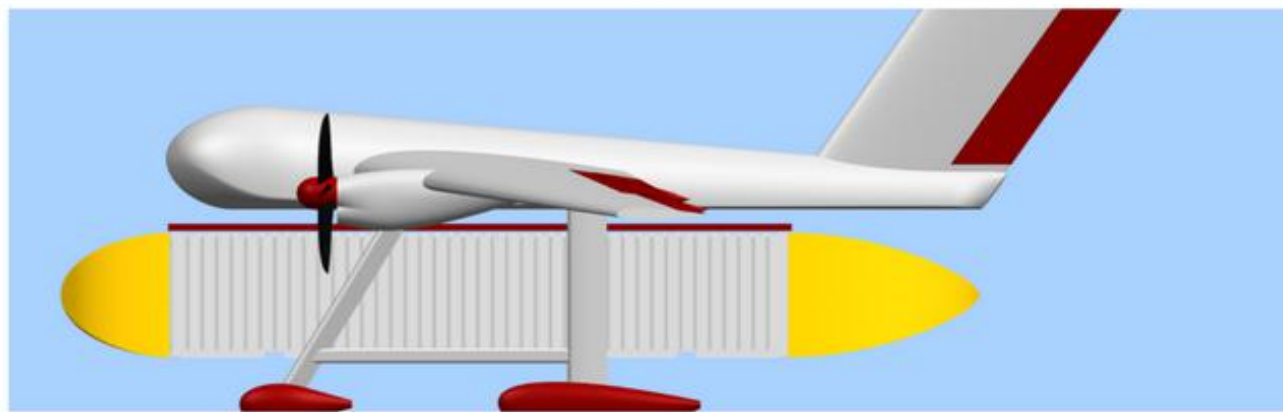
- AFTER ALL PATENTS EXPIRE, COULD HAVE AN ONGOING 60+ YEAR PRODUCTION RUN, MUCH LIKE THE C130'S (OVER 2,500 UNITS @ \$65M EA. IN TODAY'S DOLLARS).



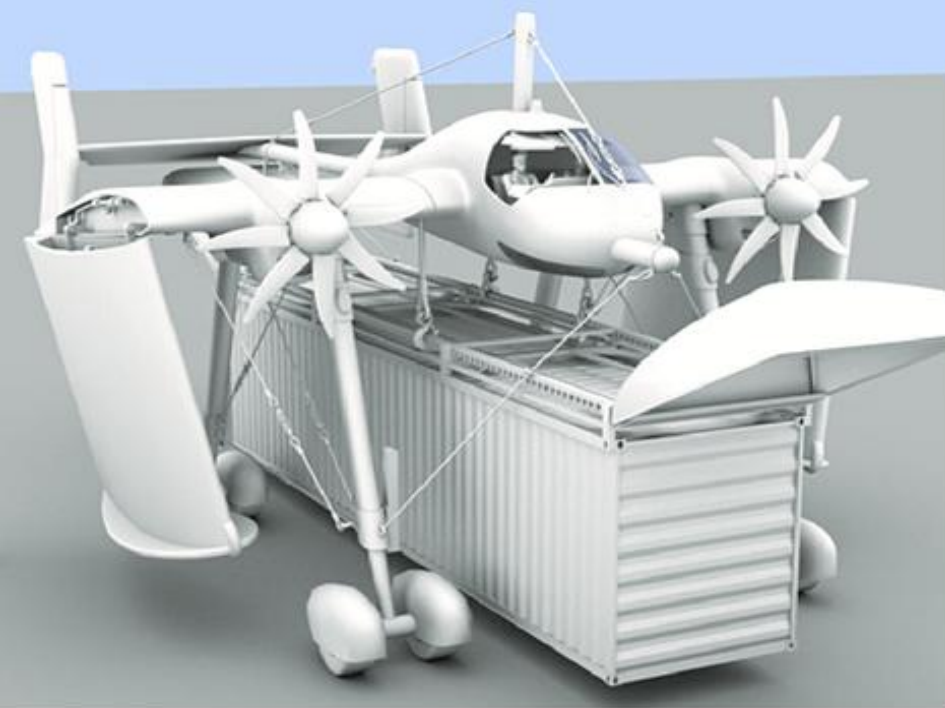
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CPTA200 With
Container and
Regular Fairings



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- Our extreme takeoff and landing (XTOL) variant can access field conditions that would be unthinkable for any other aircraft.

- We can get the payload package closer to its final destination than can any other aircraft; it can literally land anywhere.

- Our aircraft is the best choice for regions of the world where infrastructure is poor or nonexistent.

- We can go up to 53 ft. in container length and 9.5 ft. high.

- Aerial delivery of ISO containers creates faster and more efficient delivery options for freight shipment.

- Payload interface system can be configured with a drive-on 'bottom-lift' cargo deck to accommodate 'drop-off' semi-trailers.



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Lift and Fuel Consumption - Based on 2017 Analysis by DarCorp

Variable Names	CPTA200 @ L/D _{max}	CPTA200 @ 80% Power	CPTA200 @ h _{max}	C-130 @ L/D _{max}	C-130 @ 348kts
Take-off Weight [lb]	70,608	71,336	70,595	133,630	137,582
Reserve Fuel Weight [lb]	420	420	420	802	803
Landing Weight [lb]	59,193	59,177	59,173	115,290	115,310
Mission Fuel Weight [lb]	11,415	12,159	11,421	17,538	21,469
Fuel Efficiency [lb/(ton _{payload} nm)]	0.634	0.675	0.635	0.974	1.193

Fuel is an aircraft's highest operating cost. By increasing the ratio of payload weight to empty aircraft weight, we are correspondingly decreasing the amount of fuel that is consumed per payload ton-mile. Structurally, the elimination of the fuselage also provides space for ro-ro logistical operations.

[Full DAR Fuel Report 1](#)

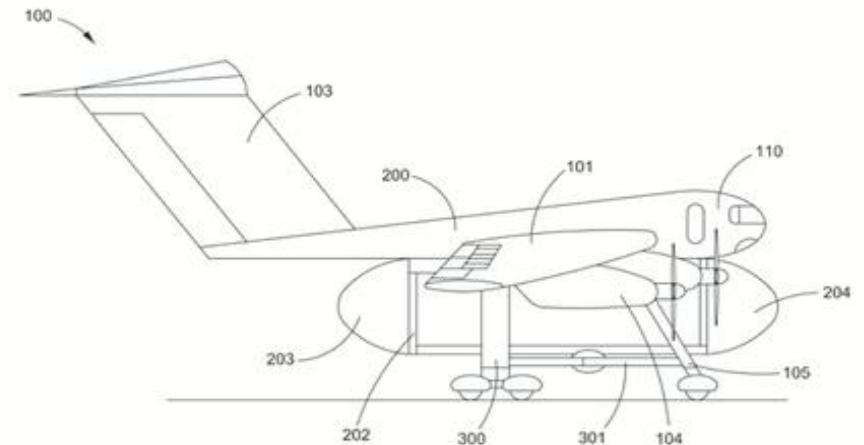
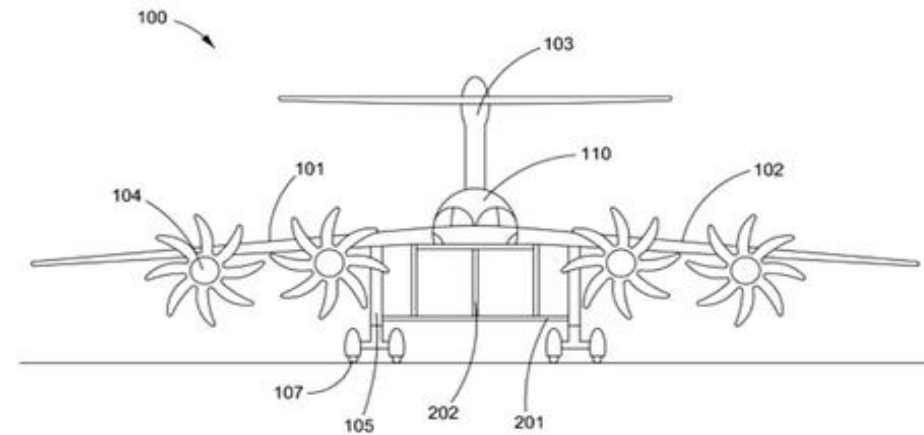
[Full DAR Fuel Report 2](#)



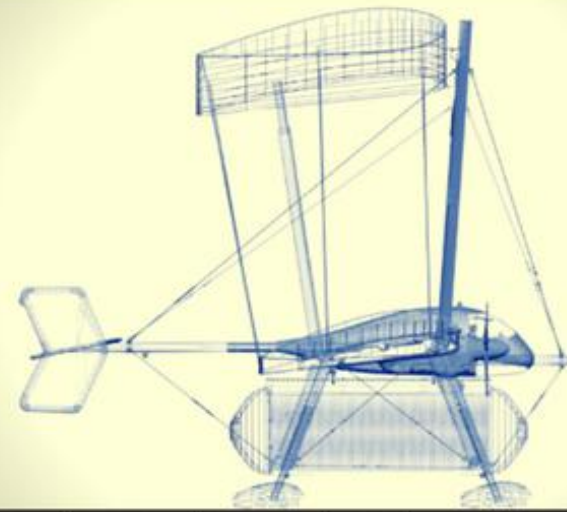
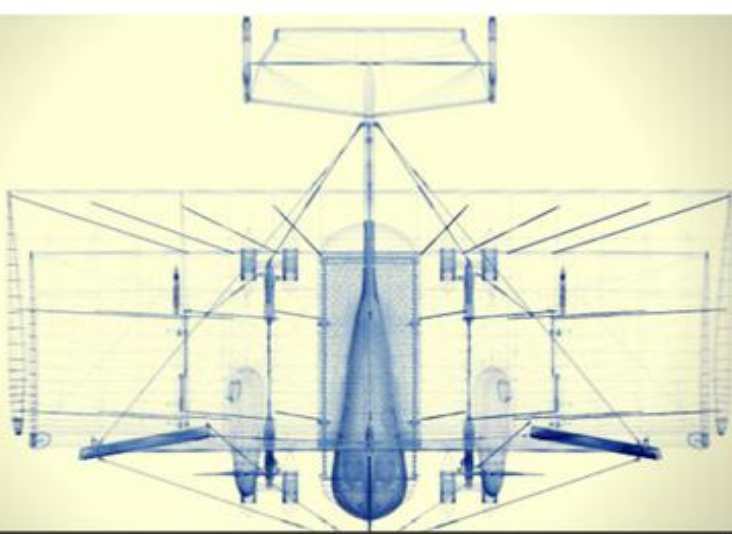


Our Family of Aircraft

In addition to CPTA 200, additional design variants include the CPTA XTOL with parawing for unprepared field access and the CPTA 3000 designed to accommodate 2 x 40 ft. containers.

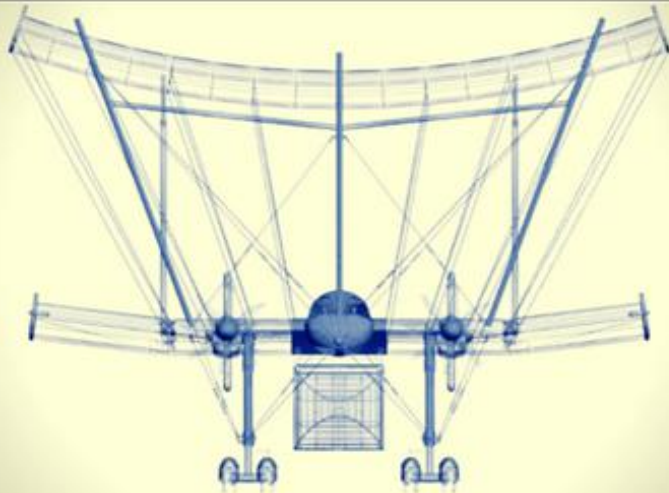


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CPTA XTOL WITH PARA-WING

The addition of the parawing facilitates heavier payloads,
and shorter takeoff and landing distances.



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Marketing & Financials



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Our Customer

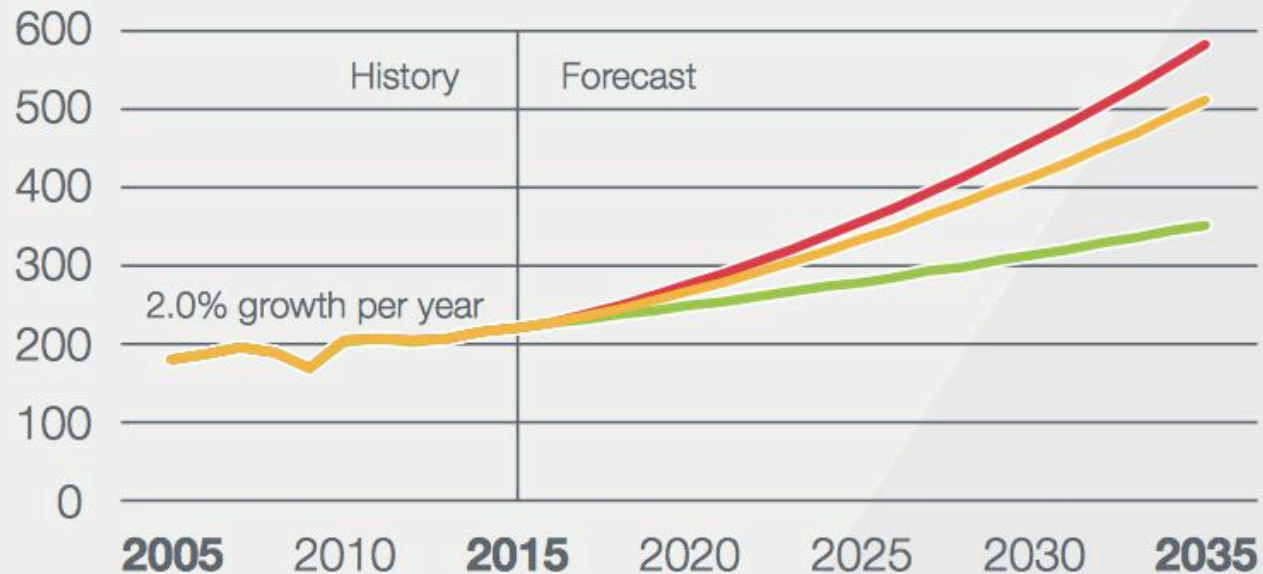
- 200+ air cargo companies
- Large direct to consumer companies like Amazon, Jet
- Other shippers who use containerized transport

The FedEx logo consists of the word "FedEx" in a bold, sans-serif font. The letters "Fed" are purple, and the letters "Ex" are orange. A white horizontal line is positioned between the "e" and the "x".

Macroeconomic Trends

World air cargo traffic will more than double over the next 20 years

RTKs
in billions



Average annual growth, 2015–2035

● High, 4.9%

● Base, 4.2%

● Low, 2.3%

Report from
BOEING '17



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We will attend appropriate B2B tradeshow and conferences to inform the industry and prospective clients of our disruptive innovations through the presentation of an accurately depicted subscale concept demonstration prototype.

Members of our team will be charged with reaching out to the executive corporate decision makers on both the client and vendor side.



We will advertise and provide public relation interviews in trade magazines and on websites.



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Financial Projections

It will cost up to \$100 million to develop the first full-size CPTA 200 demonstration prototype.

FAA Certification will cost \$400-\$500 million. By law, every itemized part of the aircraft must pass the certification process.

We conservatively project the production of 1,000 units over a 20 year time period. Demand could easily reach 2,000 units and beyond.

With a target profit margin of 10%, each unit will sell for approximately \$25 million. Development and certification will be amortized over the first 200 units, after which time projected profit margins will be increased accordingly.

Provisional purchase orders (POs), held in escrow, will convert to being executable once the 100 PO threshold has been reached; at which time aircraft production may commence. Bank financing, if required, will become available to the producer by virtue of the executable POs.



Use of Funds & Investment



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OUR USE OF FUNDS FOR THE CPTA 200 SEEKING \$5 MILLION - ROUND 1



PROTOTYPE DESIGN & DEVELOPMENT



MEDIA MARKETING, ADVERTISING, & PR



TRADE SHOWS



CONSULTING & STAFF SALARIES



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THE \$5 MILLION ROUND WILL BE USED TO UNDERWRITE UP TO TWO YEARS OF A MARKETING AND SALES EFFORT. OUR GOAL IS TO ACQUIRE A MINIMUM OF 100 CONVERTIBLE POS, AND OR TO ENTER INTO A PARTNERING AGREEMENT WITH AN EXISTING AEROSPACE MANUFACTURER.

Option 1

Sell or license the proprietary rights of the aircraft's patents and technology to an existing aerospace company. In return we are looking for a royalty on all aircraft manufactured while the patents are in effect.

Option 2

With POs in hand, we would seek to put the aircraft's certification and production out on contract bidding. We would maintain control of its dissemination.

Option 3

In the unlikely event that a manufacturer is not secured, we would endeavor to establish production facilities and manufacturing. Though this is the most challenging path to be pursued, the economic rewards are potentially the greatest.



4 Biggest Takeaways

Our aircraft will facilitate the first ever aerial transport of 40 ft. ISO shipping-containers; containers that comprise 70% of the world's total count.

While air-cargo traffic doubles over the next 20 years, we can expect to sell up to 2,000 units, grossing \$50 Billion in sales of the CPTA 200. Additional markets for the CPTAs XTOL and 3000 include cross-service military applications.

The CPTA 200 will cut fuel consumption by up to 53.5% versus the C130. This is a win/win situation for both the user's bottom line and our planet's environment.

We have a disruptive transport aircraft that costs comparatively less to produce, acquire and operate while exhibiting unprecedented logistical capabilities not possible with any aircraft currently in use today.

