## EVACUATED TUBE TRANSPORT TECHNOLOGIES (ET3) ™

**<u>WHY:</u>** Transportation is the master key to survival. A new mode (independent of fossil energy) is necessary to achieving an environmentally sustainable yet thriving economy in an urbanized world.

<u>WHAT:</u> ET3<sup>™</sup> is a global transportation system that is silent, low cost, fast, secure, safe, and environmentally friendly. ET3 maximizes transportation value by slashing infrastructure and operating costs; while at the same time dramatically increasing safety, reliability, speed, frequency, and accessibility.

**HOW:** ET3 mimics nature by creating 'Space Travel on Earth'. Travel in the evacuated environment of space is the most proven form of travel in the universe (we orbit about 300B miles during a typical 70 year lifetime). Automobile sized capsules (400lb empty weight) carry 6 persons or 800lb of cargo. The maglev capsules operate in two-way networks of 5' diameter tubes. Air is permanently removed from the sealed tubes to eliminate drag force. Airlocks at portals allows capsule transfers without admitting air. The pressurized capsules are accelerated by linear electric motors; then they merge into the flow of capsules where they coast using little if any additional power. ET3 is automated. Full speed passive switching enables non-stop operation and enroute destination changes. Upon switching to an off-line destination portal access branch, the capsules decelerate using a linear generator that recovers acceleration energy.

**VALUE:** ET3 requires 1/30th of the materials of high speed rail, so construction costs a tenth as much. A pair of ET3 tubes at 350mph can exceed the capacity of a 40-lane freeway at half the cost of 4 lanes. ET3 capacity scales with design velocity. ET3 can provide 50 times more transportation per kWh than electric cars or trains, yet operates at 400mph domestic, to 4000mph international at less than a tenth the cost. ET3 can also transport energy and water more efficiently. Since ET3 is automated, and the travel path is isolated, risk of human error, mechanical failure, weather risks, and errant vehicles are mostly eliminated.

WHO: The licensees of ET3 are leading experts, companies, and institutions. Structure: The ET3 company has adopted a license based open consortium business model. Our core product is a license to use and contribute to the ET3 IP. We sell non-exclusive licenses to participants who agree to use (and contribute to) ET3 IP in a reciprocal manner with the company and other licensees (6% value added royalty on use). The consortium (debt free & profitable since inception) operates by and for the licensees who collaborate using ET3 websites and traditional business elements. Charter licensees who successfully bid to perform needed services are compensated with shares exchanged for the agreed value of contracted work. Goal: We provide a new market to maximize the profit potential for licensees and investors by leveraging existing talent and assets to: implement, manage and improve ET3 technology; thereby creating a 'blue ocean' market for existing capacities. Our present focus is building a 3 mile demo (375mph speed) capable of scaling into a network. Our ultimate goal is a global system carrying 90% of goods and passengers movements greater than 30 miles. Eventually every person in the world is a potential licensee to use the system. Readiness: The scientific and technical foundation of ET3 is solid. The key technologies and capacities are proven. Billions of dollars worth of skills, IP, hardware, production capacity, and materials necessary to implement ET3 already exist. Leveraging this capacity will allow ET3 to grow much faster than past transportation paradigm shifts.

**BACKGROUND & HISTORY:** 1910 R.H. Goddard designed rockets and airless tube travel systems. 1970s Swissmetro and The Rand Corp. produced studies of maglev trains in reduced pressure tunnels. ET3 Founder Daryl Oster conceived of ET3 while studying mechanical engineering in the early 1980s. 1997 company et3.com Inc. formed in Florida to develop ET3, the first patent (US-5,950,543) issued in 1999. 2002 -2005 ETT-HTSM (high temp superconductor maglev) technology exchange at SWJTU in China. 2005 -2011 ET3 consortium grows to 125 individuals, companies, and institutions in 9 countries. 2011 ET3 wins commercial product of the year at 7<sup>th</sup> annual DaVinci Institute Inventor Showcase in Denver. 2012 ET3 Global Alliance Incorporated in Colorado, a March news blurb stimulates 25% growth in 3 days!

**FUTURE:** 2yrs- a 3 mile demo at 375mph (\$10M cost recovered in a year as a \$25 amusement ride). 5yrs- 300 mile system connecting major cities (greater than 30% ROI for 10M passengers/yr at \$0.10/mile). 10yrs- national networks in most major countries (if all built to the same standard can be interconnected). 20yrs- global ET3 network displacing up to 90% of the global transportation (presently \$8.65T/year).