

# 2017

# FRA Rail Program Delivery

## Meeting

# Hyperloop One

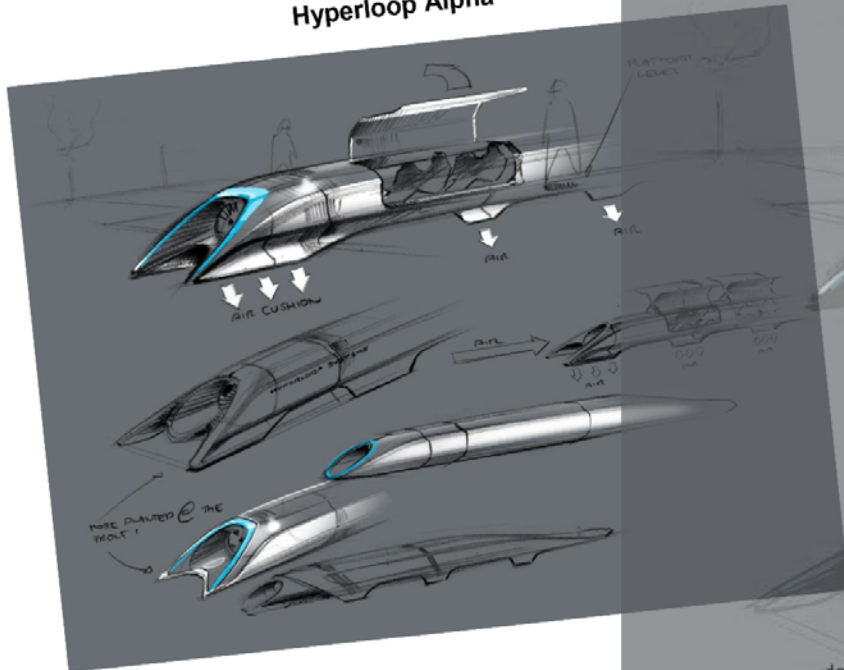
Rob Ferber

Chief Engineer

# Hyperloop Technology

## Origin and Explanation

## Hyperloop Alpha



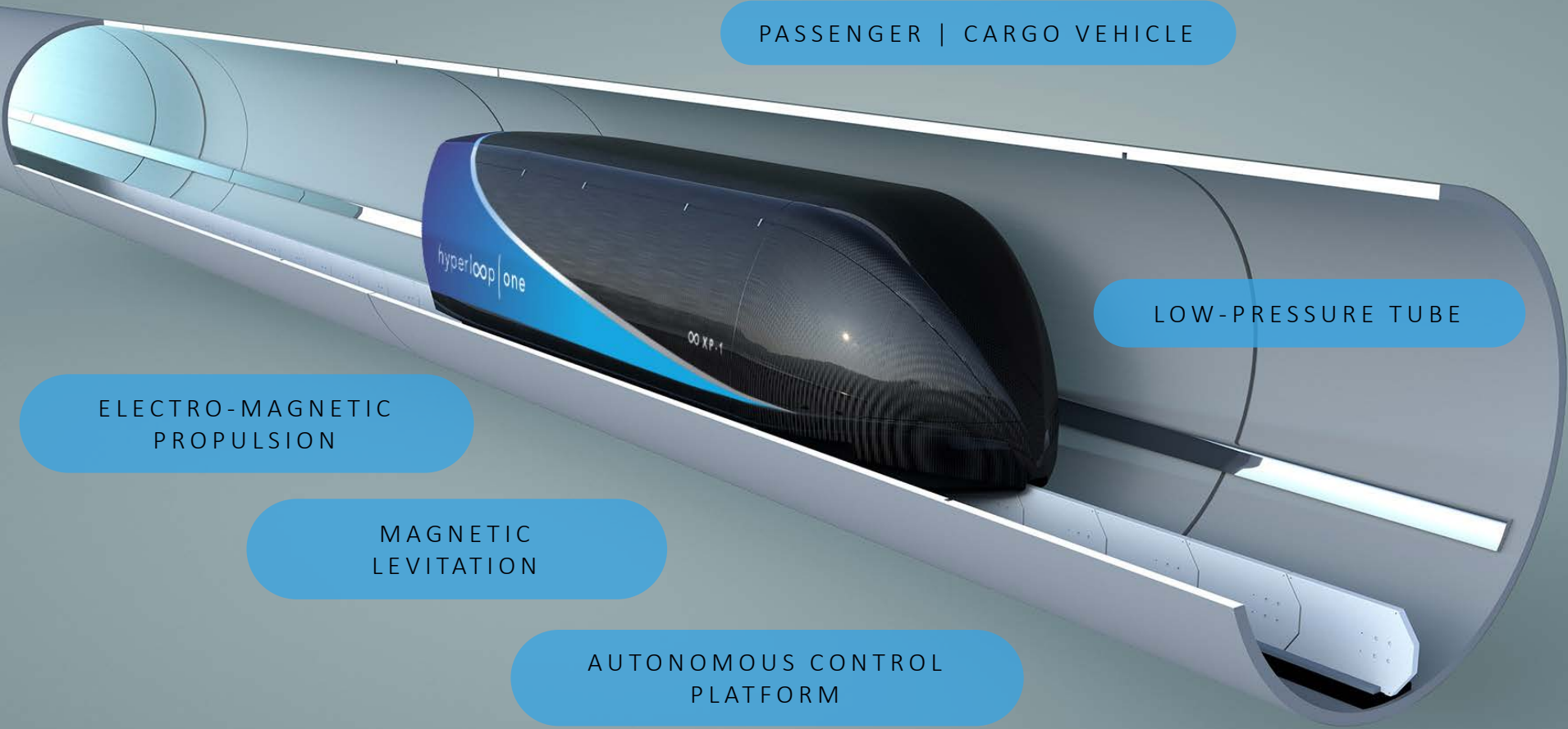
### Intro

The first several pages will attempt to describe the design in everyday language, keeping numbers to a minimum and avoiding formulas and jargon. I apologize in advance for my loose use of language and imperfect analogies.

The second section is for those with a technical background. There are no doubt errors of various kinds and superior optimizations for elements of the system. Feedback would be most welcome - please send to [hyperloop@spacex.com](mailto:hyperloop@spacex.com) or [hyperloop@teslamotors.com](mailto:hyperloop@teslamotors.com). I would like to thank my excellent compadres at both companies for their help in putting this together.

### Background

When the California "high speed" rail was approved, I was quite disappointed, as I know many others were too. How could it be that the home of Silicon Valley and JPL - doing incredible things like indexing all the world's knowledge and putting rovers on Mars - would build a bullet train that is both one of the most expensive per mile and one of the slowest in the world? Note, I am



PASSENGER | CARGO VEHICLE

LOW-PRESSURE TUBE

ELECTRO-MAGNETIC PROPULSION

MAGNETIC LEVITATION

AUTONOMOUS CONTROL PLATFORM

# ... And Then We Made It Real

Test Facility in Nevada



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DevLoop  
NORTH LAS VEGAS, NEVADA

World's Only Full-System Hyperloop Test Facility

U.S. Department of Transportation  
Federal Railroad Administration

XP-1

NORTH LAS VEGAS, NEVADA

First Hyperloop

One vehicle



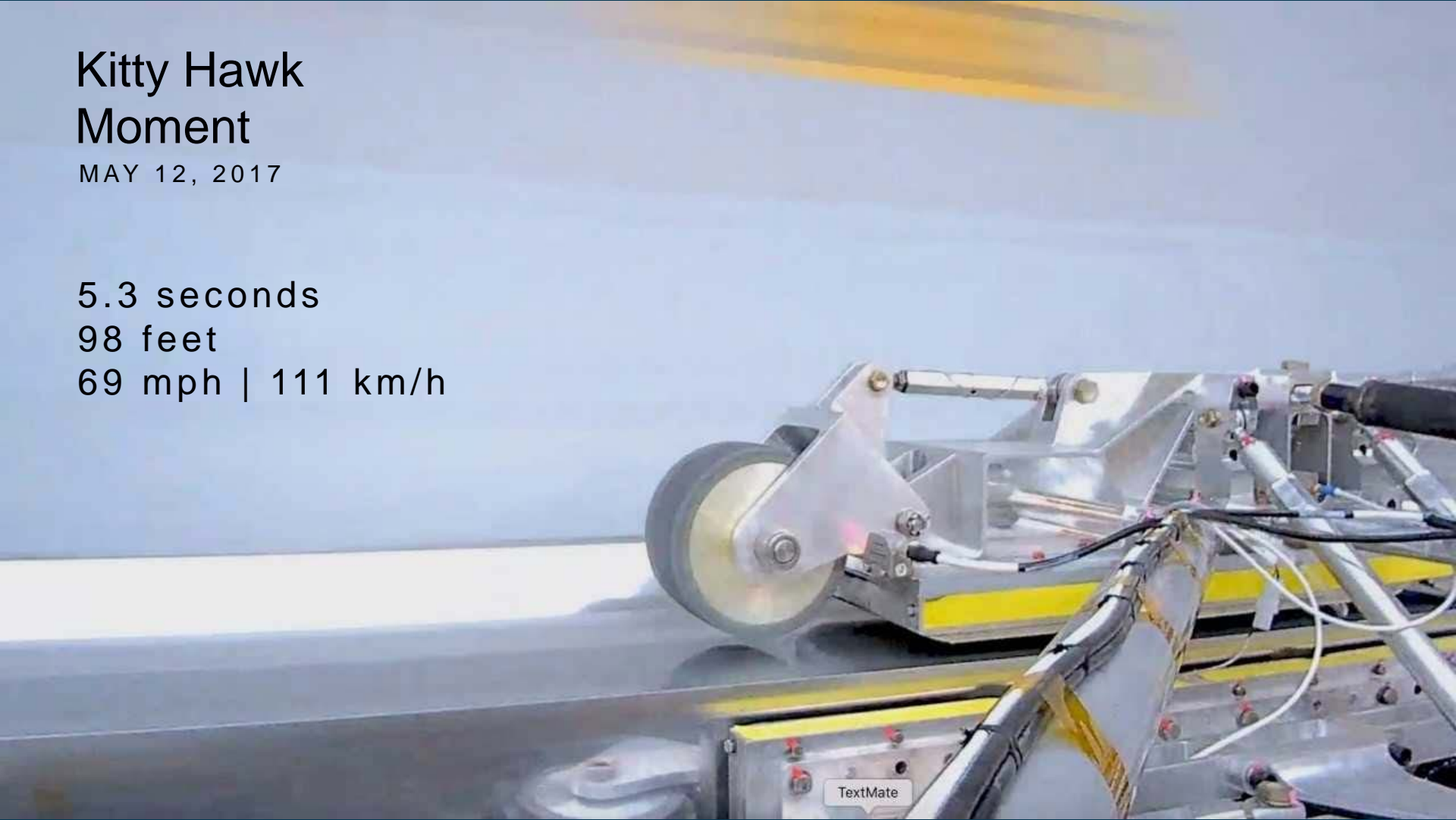
# Kitty Hawk Moment

MAY 12, 2017

5.3 seconds

98 feet

69 mph | 111 km/h



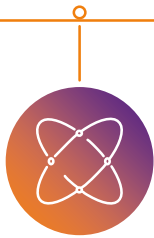
TextMate





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# System Features



## Direct

Every journey is non-stop, intelligently routes passengers and cargo pods quickly to destination



## On-Demand

Autonomous operations eliminates need for schedules



## Intermodal

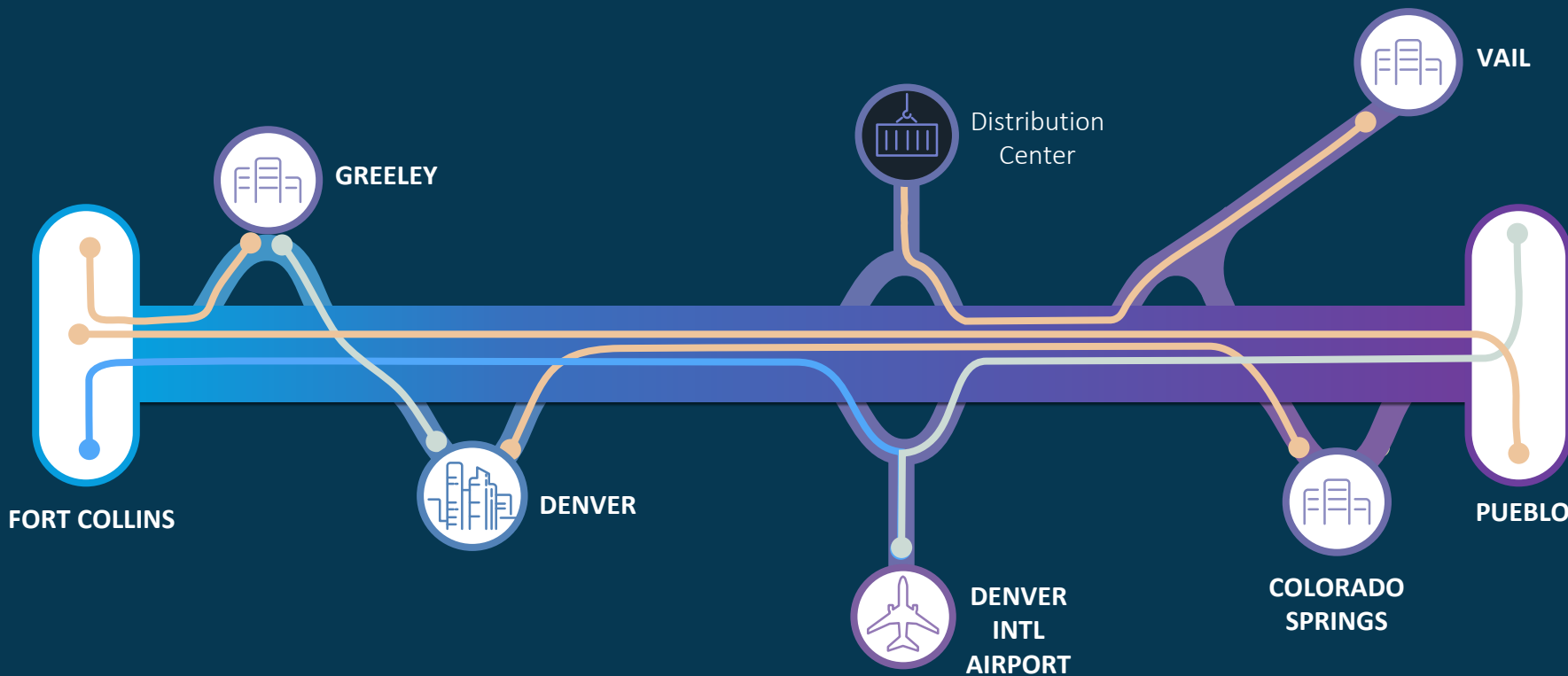
Frequent pod departures, connects to other modes



## Comfortable

Smooth as an elevator, acceleration and deceleration similar to a commercial jet

Board & Disembark Anywhere, All Journeys Non-Stop



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U.S. Department of Transportation  
Federal Railroad Administration

# Colorado Project

Colorado DOT/Hyperloop One Feasibility Study

- Concept proposed by AECOM in partnership with CDOT, City of Denver, Denver International Airport and the City of Greeley.
- Feasibility study now underway to study potential alignments, ridership, cost/benefit and regulatory issues.
- Six to nine month time frame.



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# Company Profile

US Company with Facilities in California and Nevada

# OUR TEAM 300+





INNOVATION  
CAMPUS  
LOS ANGELES





**METALWORKS**  
NORTH LAS VEGAS, NEVADA



DEVLOOP  
NORTH LAS VEGAS, NEVADA

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# Thank you!

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<http://hyperloop-one.com>