

# On-demand mobility ??

Bruce Landsberg – Senior Safety Advisor



# Other Attempts – not so successful



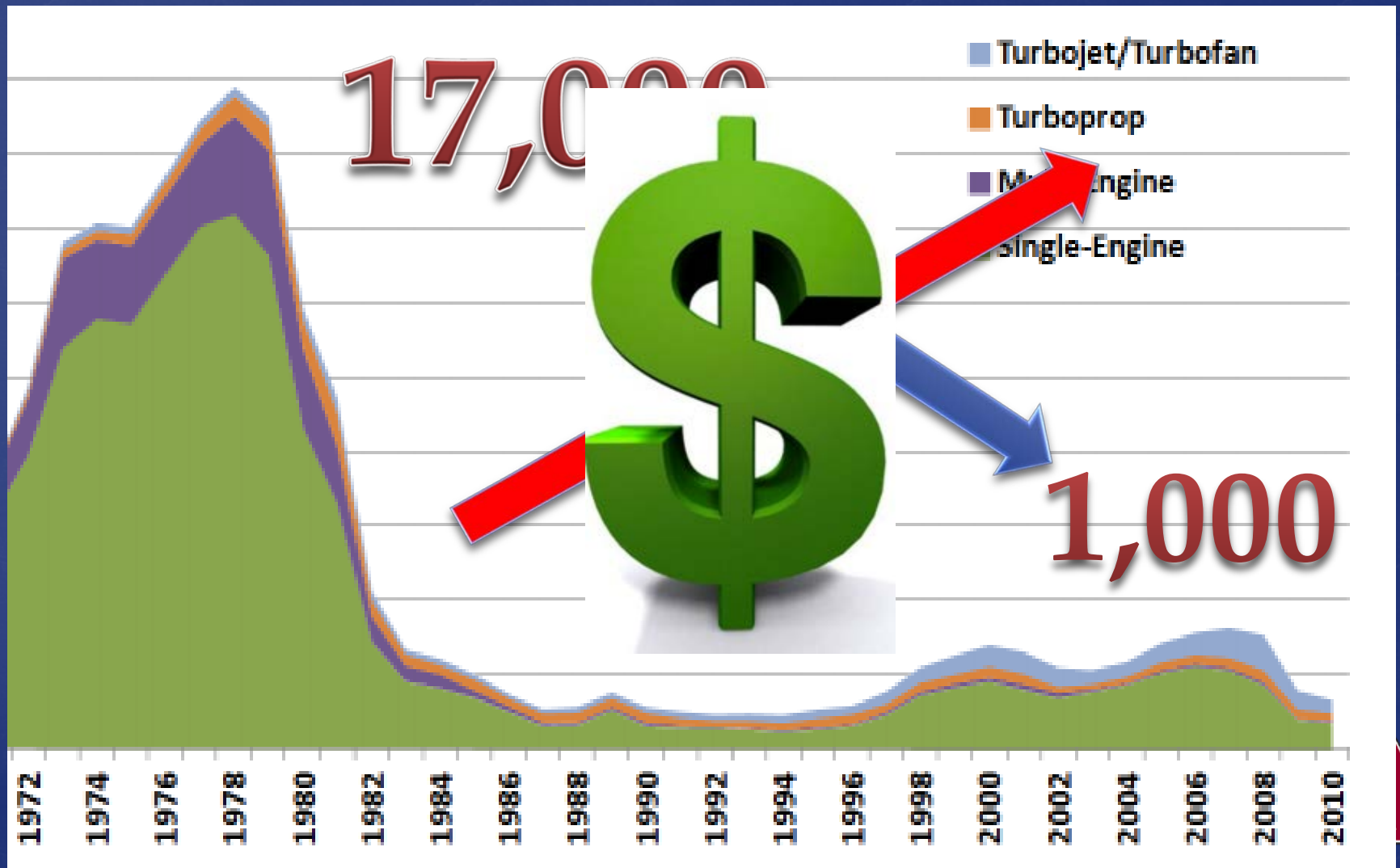


# Barriers

*Cost & Complexity*



# Piston Sales



# LIABILITY

“Even when I **win** - it only costs me \$2,000,000 !”



**“Selling fewer – gotta raise  
the price ....”**





# Engineering Excitement ??

$$\underline{V.(\alpha - dy/dx) = w \int_0^c \frac{\gamma(x')}{(x - x')} dx'}$$

$$\underline{V.(\alpha - dy/dx) = w \int_0^c \frac{\gamma(x')}{(x - x')} dx'}$$

$$\underline{x = c(1 - \cos(\theta))/2}$$







# New & Wonderful but.....



# Reliable and available...



160,000





# Lotta Parts

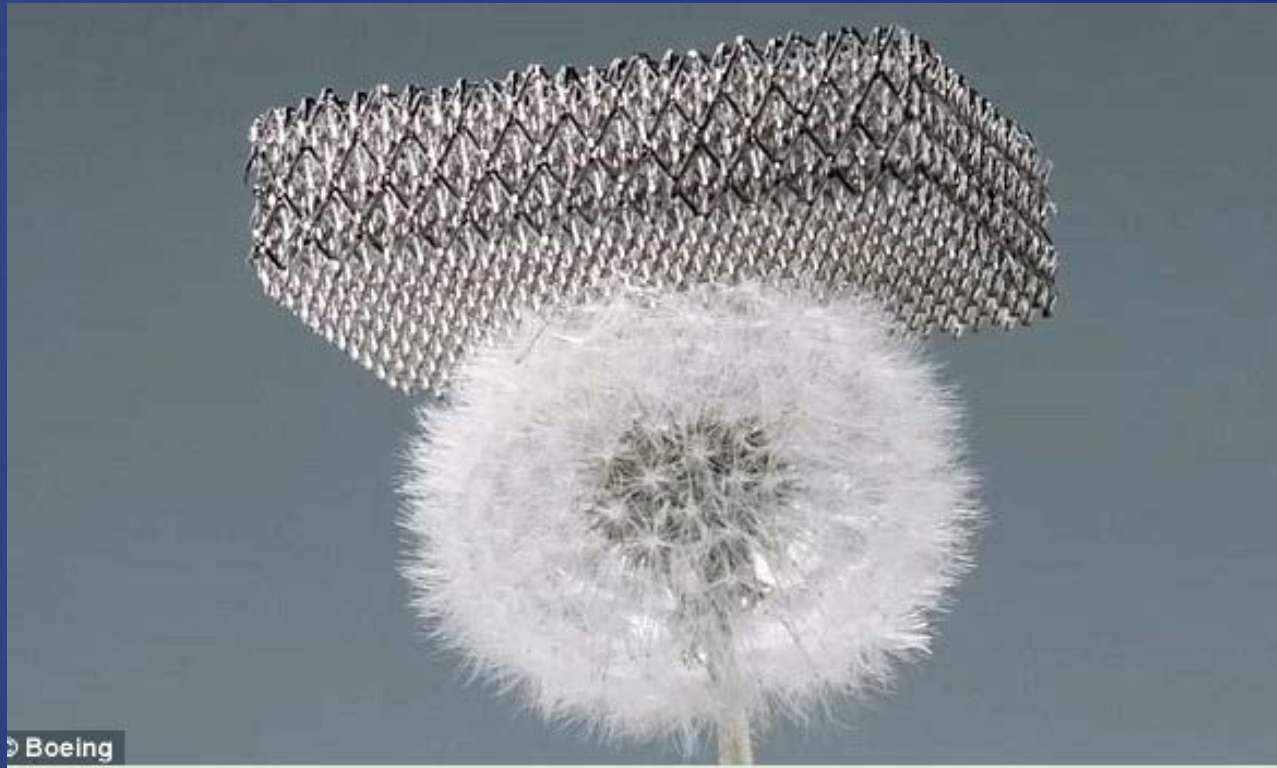




# Many Fewer Parts



# New Thinking....





# 3-D Printing ?





# Low Volume - High Quality – Low Price ?



# Old - Really Old .....





# Safety Downloads ?





# Flies itself....



**Smart autopilot – but cheap (  
\$200 each...)**

**Fails once every 1000  
flights (maybe) so...\***

**Put in three – for voting  
purposes....**



# Some Math....

$.001 \times .001 \times .001$

Is a *really* small  
number!!!!

$.000000000001$





# Transition from Now to Future



# Infrastructure - Airports





# Pilots – Not so Many

Why ?

*Cost & Complexity*





# Limited Time



# We need some *fast* answers

- ◆ Better ways to build existing aircraft
- ◆ New engines to retrofit
- ◆ Better safety – maintenance monitoring
- ◆ Easier to fly ( UAS Tech)







**Thank You !!!**

