Perspectives on Urban Mobility

Chris Van Buiten
Vice President, Sikorsky Innovations
Intersection of electric propulsion and autonomy will enable successful urban mobility systems in the next decade.
THE NEWMAN CRITERIA

“Until you’re ready to fly a person in it, it is a Toy – When you are ready to fly your family in it.... everyday, it is an aircraft.”

Dan Newman, Boeing Tech Fellow 2017 AHS / AUVSI
A SIKORSKY PERSPECTIVE

Vehicle → Sikorsky Strength
Electric Drive → In Work
Power Storage → Evolving Quickly
Flight Control → Our Focus
Fleet Optimization → Happening Today

Infrastructure

Airspace Management

Not Us

+ +

MATRIX TECHNOLOGY

+ +

Infrastructure

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Sikorsky S-92®
- Triplex voting
- Fail tolerant design
- Lightning Strike
- HIRF
- DAL-A software
- 2,000+ flight hours per year

Flight critical components designed to “9 9’s” = 1 failure per billion flight hours

Industry leading S-92® integrates to 1 loss per million flight hours.

Potential Future Urban Mobility Fleet:
50,000 aircraft X 3000 FH/Vehicle-Year = 150,000,000 flight hours per year / 1 loss per million flight hours

= 150 accidents per year at current best in class safety standard
Is that acceptable?
OUR CONTROL MATURATION APPROACH

**PHASE I: MATURE TECHNOLOGY**

Build on FBW Pedigree

**PHASE II: CERTIFY AND PROVE**

Fly on aircraft where safety measure is millions of flight hours

**PHASE III TBD**

Mature safety measures to billions of hours as urban mobility market grows
YOU ARE LIKELY FALLING INTO 3 CAMPS...

Wow, what a laggard
My Cell phone can solve this problem

No aviation scars

I hope he is not right, we’ve got this

But No, my kids will not be flying anytime soon

Sikorsky has a rigorous approach

Dan Newman was right

“We pioneer flight solutions that bring people home everywhere…. every time™”