Recent Successes in Weather Technology Transfers

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Quick Look

- What’s a TRL?
- Why Buy Weather?
- WSI Tech Transfers
- Challenges in Tech Transfer

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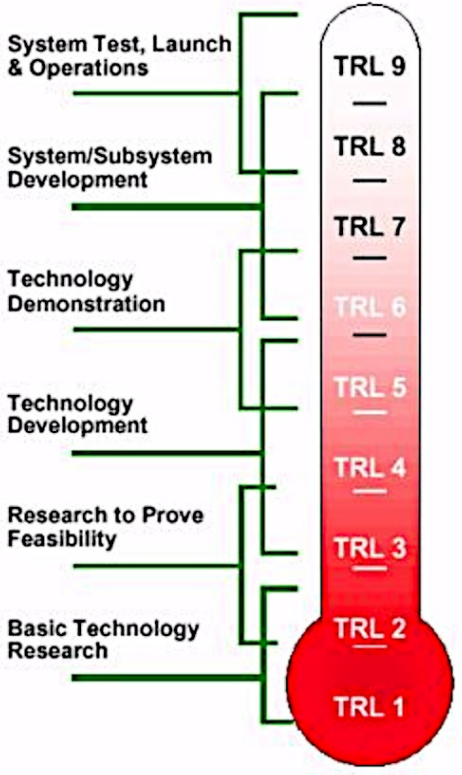
What's a Technology Readiness Level?

- Fundamental research to an operational in-use application.
- SBIR
  - Phase I - TRL 2
  - Phase II - TRL 3-5
  - Phase III - TRL 8 Acquisition or Commercialization
- Phase 3 ~ Kickstarter
- Recognized difficulty in moving from 6 to 8



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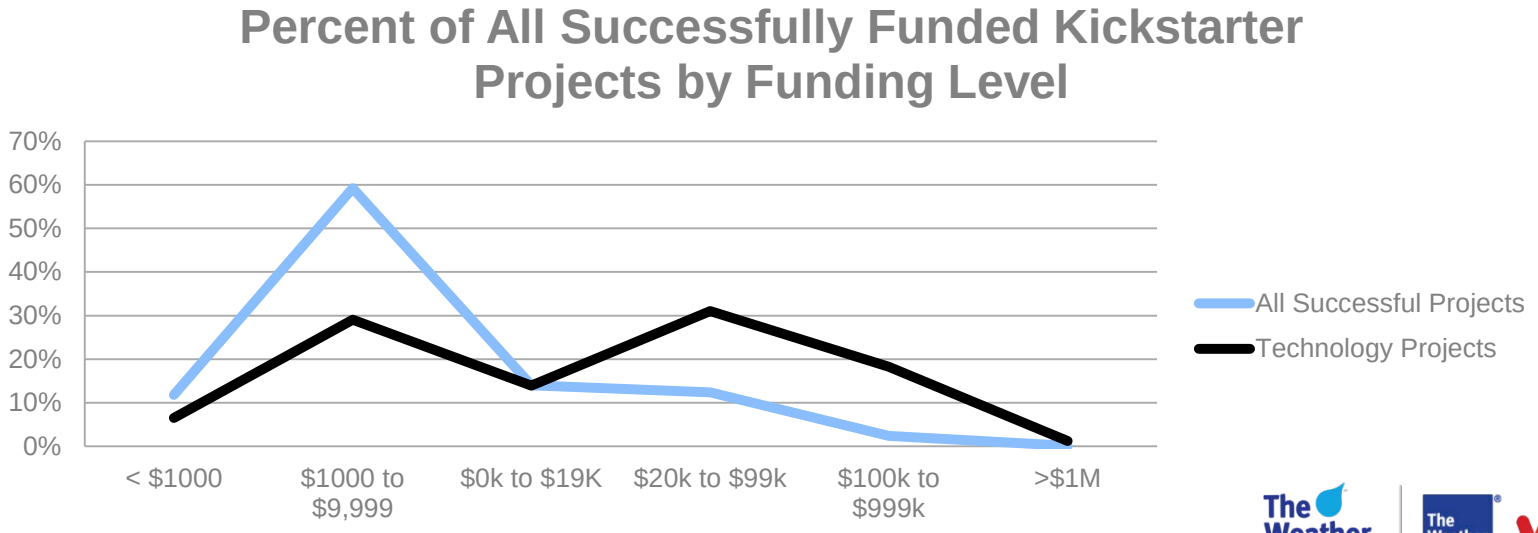
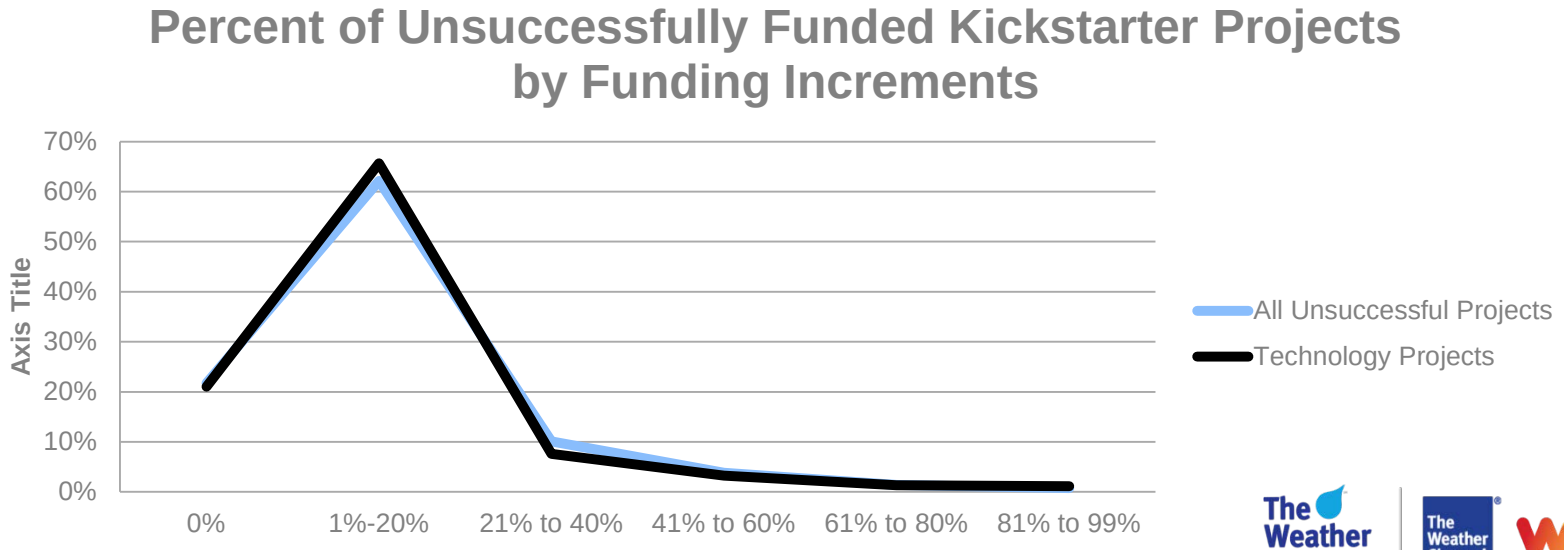
What does this look like to Kickstarter?

- Overall 37% success rate for funding, 20% for tech
- A third of all >$M funded projects are tech
- Tech generally requires more money to fund



How about Unsuccessfully Funded Kickstarters?

- Most unsuccessful projects receive minimal support
- 8% of All Unsuccessful projects are tech,17% of all the pledged dollars are tech - tech takes more to fund



Why Buy Weather?

FAQ: Why do I need to buy this weather when I can get it for free?

- What does industry do?
  - Interface to Commercial Systems
  - Apply to Industrial Decisions - Data and Applications
  - Customize to Industry Unique Needs
  - Provide a Service Level Commitment

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WSI Tech Transfer

- WSI Inflight - NASA cockpit weather R&D into Sirius commercial service
- Industry Adaptations:
  - WRF: WSI runs our own version globally
  - GTG: Implemented our own facsimile to 2.5 via published works
  - HIWC: Relied on published works on the topic
- Total Turbulence - Roots in NASA that successfully transferred into a commercial patent

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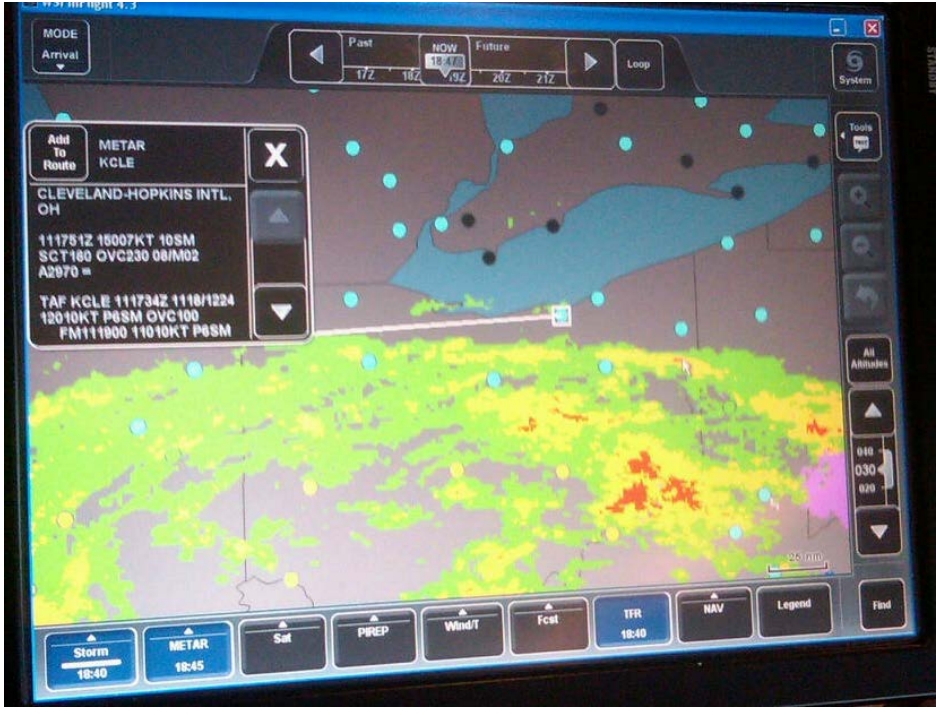
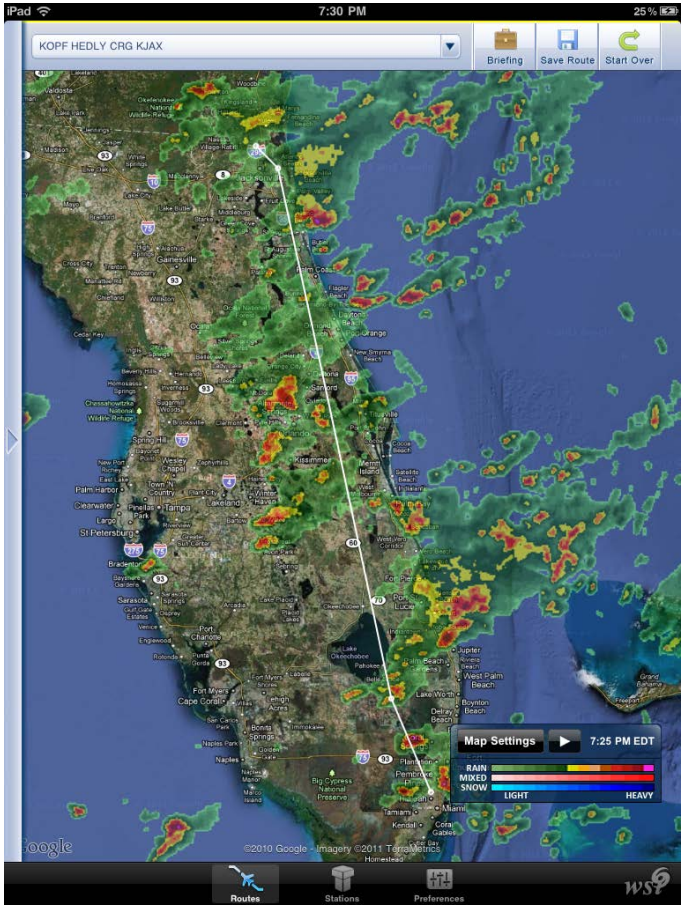
Industry Leading - WSI Inflight





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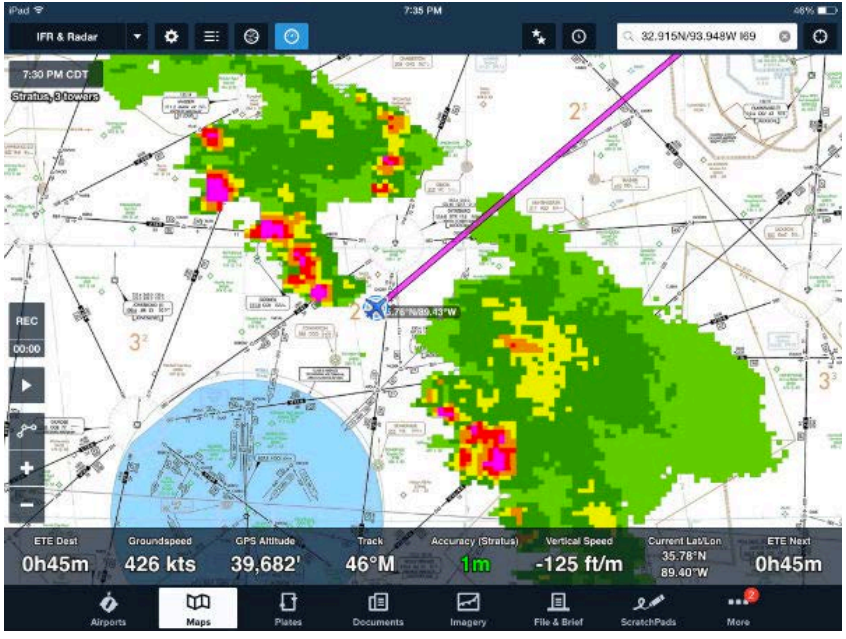
Industry Supporting - Safe Flight 21, CAPSTONE, and ADS-B FIS-B

In the Capstone project, a 47% reduction in accidents was seen for Capstone-avionics equipped aircraft



https://buy.garmin.com/en-US/US/in-the-air/discontinued/mx20/prod9716.html#gallery-dialog

http://ipadpilotnews.com/2015/06/ads-b-weather-look-like/

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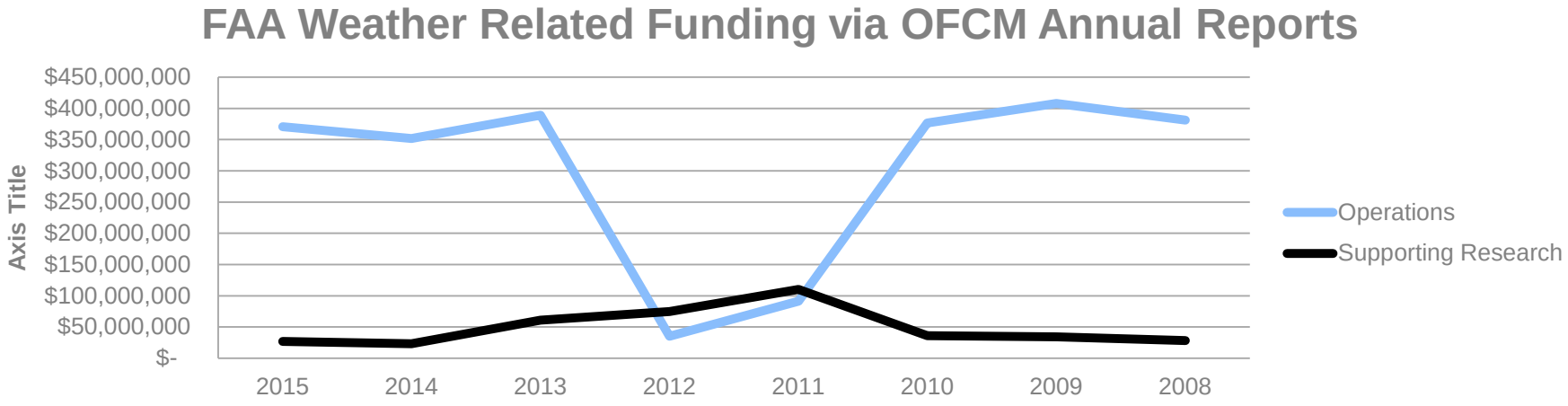
FAA Weather Related Funding

- Peaks and Valleys
- Federal budget vs. Actuals
- Program Reallocations



Challenges in Tech Transfer

- The Premise of RTO is that there will be “R”
- The attrition rate of “R” to “O” is high
- Federal dollars for RDT&E
  - Susceptible to the same budget constraints
  - Nearly 90% goes to large primes for R&D
    - Ships, planes, and satellites are expensive
  - Organizational alignment between RDT&E and Ops