The Realities of a Business Case

Purpose

Development

Outcome

Purpose

- Improve the organization
  - Understand the goals of the organization
  - Define metrics for success
- Influence decision makers
  - Obtain use of limited resources
  - Prove value of the effort
  - 80/20 Rule
- Example - Turbulence

Development - Turbulence Example

- Organizations
  - Government
  - Airlines
- Goals & Metrics
  - Safety = Injuries
  - Efficiency/Emissions = Fuel burn
  - Capacity = Altitude blockage
- Constraints
- Decision makers – Who is behind the curtain?

Turbulence Example - Safety

- Current Model
  - PIREPS = Wright Brothers
  - Chat Room
- IF EVERYONE IS STRAPPED IN WITH CARTS STOWED, NO ONE GETS HURT.
- KEY IS NOT TO CRY WOLF & F/A IGNORE WARNINGS

Turbulence Example – Efficiency/Emissions

- Assumptions
  - Optimum altitudes for fuel burn
  - Standard industry values
- Range of primary variables
  - % of times leaving optimum altitude
  - Altitude deviation
  - Time off optimum

Turbulence Example – Capacity

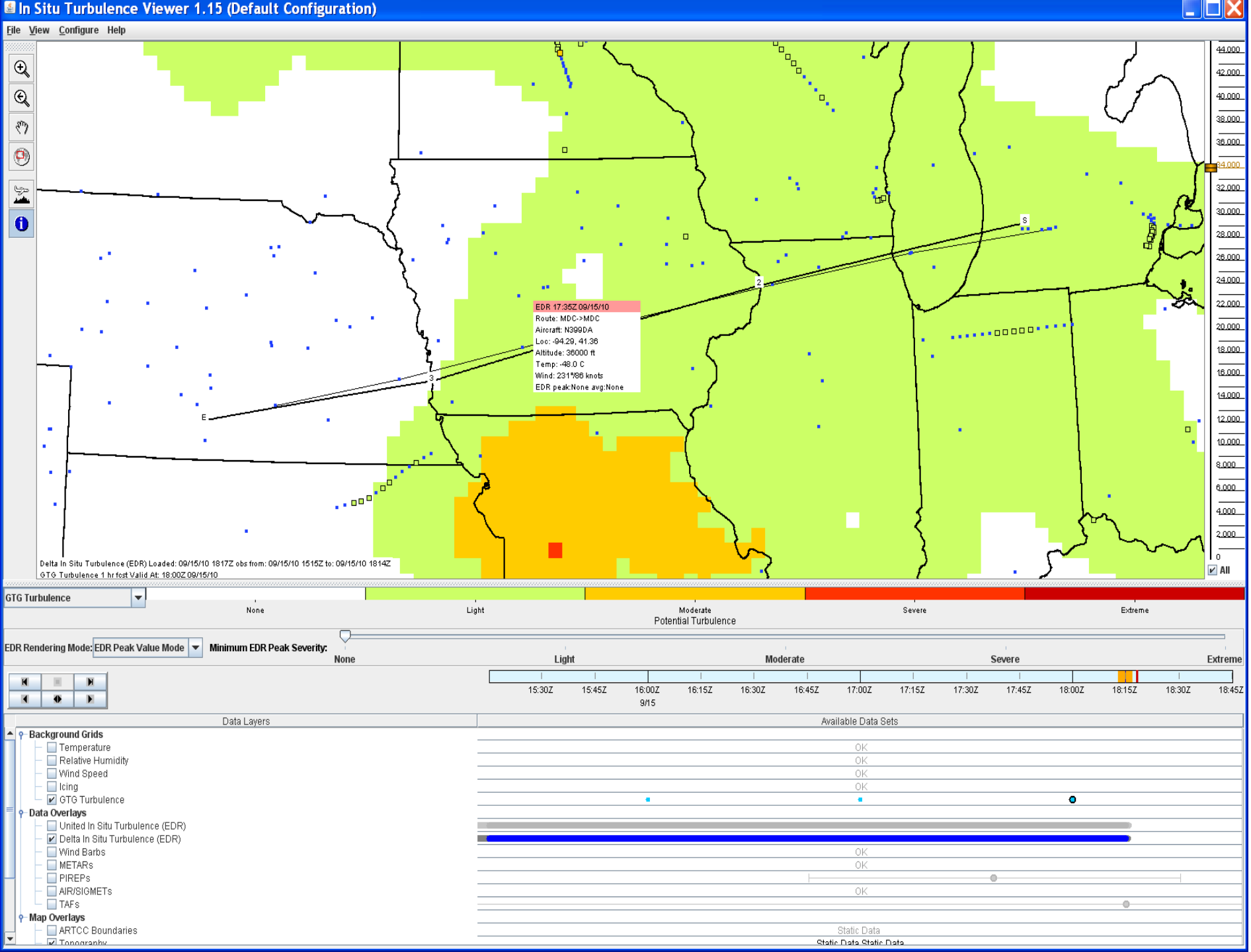
- Assumptions
  - Tools = ATC Chat room, Dispatcher, Upper Air chart, Radar
  - Dispatch vs. en route results
  - De facto blockage
- Variables
  - Reporting subjectivity
  - Cabin management
  - Tolerance/Risk factors
  - Decision drivers
  - Workload drivers

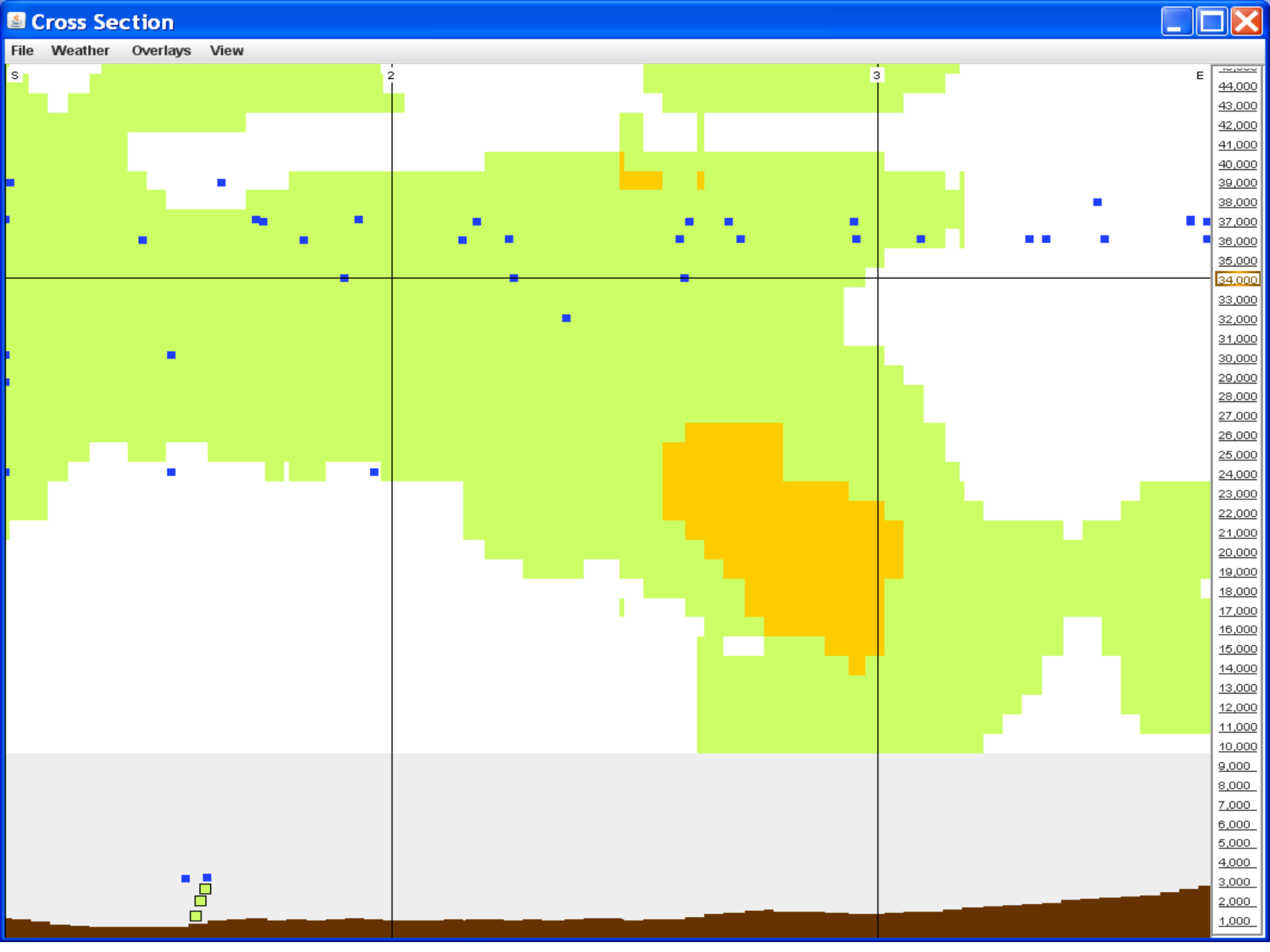
Constraints

- Variability – Meteorology, Dispatch, Pilot, Controller
- Solution Mix for Product
  - Airline, Government, Commercial or Mix
  - Costs burden
- Distractions
  - Airline priority of the day – Mergers, Fuel, Economy
  - FAA Bias toward airline solution
- Political Will
  - FAA – NextGen 4D Weather Cube
  - Airlines – Validate Benefits –Catch 22

Outcome

- GOAL ATTAINMENT
  - Was solution sufficient for all organizations?
  - Did metrics meet expectations?
  - Did better data produce Better decisions?
- DECISION MAKER S
  - Is there political will to move forward?
  - Who will decide?
- CATCH 22 - Who will participate & when?


In Situ Turbulence Viewer 1.15 (Default Configuration)
File View Configure Help
EDR 17:35Z 09/15/10
Route: MDC->MDC
Aircraft: N399DA
Loc: -94.29, 41.36
Altitude: 36000 ft
Temp: -48.0 C
Wind: 231°/86 knots
EDR peak:None avg:None
Delta In Situ Turbulence (EDR) Loaded: 09/15/10 1817Z obs from: 09/15/10 1515Z to: 09/15/10 1814Z
GTG Turbulence 1 hr fcst Valid At: 18:00Z 09/15/10
All
GTG Turbulence
None
Light
Moderate
Severe
Extreme
Potential Turbulence
EDR Rendering Mode: EDR Peak Value Mode
Minimum EDR Peak Severity:
None
Light
Moderate
Severe
Extreme
15:30Z 15:45Z 16:00Z 16:15Z 16:30Z 16:45Z 17:00Z 17:15Z 17:30Z 17:45Z 18:00Z 18:15Z 18:30Z 18:45Z
9/15
Data Layers
Available Data Sets
Background Grids
Temperature
Relative Humidity
Wind Speed
Icing
GTG Turbulence
Data Overlays
United In Situ Turbulence (EDR)
Delta In Situ Turbulence (EDR)
Wind Barbs
METARs
PIREPs
AIR/SIGMETs
TAFs
Map Overlays
ARTCC Boundaries
Topography
OK
Static Data


Cross Section
File
Weather
Overlays
View
S
2
3
E
44,000
43,000
42,000
41,000
40,000
39,000
38,000
37,000
36,000
35,000
34,000
33,000
32,000
31,000
30,000
29,000
28,000
27,000
26,000
25,000
24,000
23,000
22,000
21,000
20,000
19,000
18,000
17,000
16,000
15,000
14,000
13,000
12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000

Inspect Values