Minutes of the Federal Aviation Administration (FAA) SWIM Industry Collaboration Workshop – SWIM Industry-FAA Team (SWIFT) Meeting #4 August 15, 2018 (9am – 3:30pm)

American Farm Bureau Federation, 600 Maryland Avenue S.W., Suite 1000W (Washington Room), Capital Gallery West, Washington, D.C. 20024

1. Welcome and Review of Current Tasking

1.1. The meeting was held at the American Farm Bureau Federation, 600 Maryland Avenue, SW, Suite 1000W (Washington Room), Capital Gallery West, Washington, D.C. 20024, on Wednesday, August 15, 2018 at 9am

1.2. The fourth meeting of the Federal Aviation Administration (FAA) – SWIM Industry-FAA Team (SWIFT) was called to order by David Almeida, LS Technologies, SWIM SME and Strategist.

1.3. Representatives from FAA, American Airlines, Delta Air Lines, UPS, Southwest Airlines, United, JetBlue, FedEx, NASA, AOPA, Jeppesen, NBAA, Mitre, Airlines for America (A4A), ARINDirect, SeaTec, SaabSensis, Harris Corporation, Thales, LS Technologies, Noblis, Leidos, Metron Aviation, airlines, and the public attended. See Appendix A for more information about attendees.

1.4. Felisa White, FAA SWIFT Fed Lead, kicked off the forum welcoming everyone.

1.3.1 Felisa turned the meeting over to Josh Gustin, CINP Group Manager and SWIFT Sponsor, for introductions

1.5. Josh Gustin, FAA Communications, Information, and Network Programs (CINP) Group Manager, welcomed new attendees

1.4.1 Josh introduced Kris Burnham, Vice President of Program Management Organization (PMO) with the Air Traffic Organization (ATO)

1.6. Kris Burnham, VP of PMO, ATO discussed building business cases and the work she represents (today and over her nearly 25 years of service)

1.5.1 Overview of her background and experience

1.5.2 Discussed the importance of the program for the FAA and public

1.5.3 Kris expressed appreciation to the attendees for their participation

1.5.4 Discussed the importance of building business cases in the FAA

1.5.5 FAA had difficulty estimating the value of FAA data to industry. SWIFT provides the FAA with this insight

1.5.6 The SWIFT helps ensure the government's investment dollars continue to support the participants' business models

1.6 Josh Gustin introduced Rob Goldman (Delta)

1.6.1 Thanked members of the FAA and industry for their support

1.6.2 Forums reduce the risk on FAA programs and increase benefits to everyone

1.6.3 Reviewed the FAA Automation Roadmap

1.6.4 Discussed the data and support required to enable FAA systems improvement

2 Dave Almeida, Facilitator, reviews the agenda (Corresponding to slide 2)

2.1 Discussion of case studies

2.1.1 Created a forum to discuss some of the operational issues that exist today. At SWIFT Meeting #3 we discussed Delta's "Taxi Out Return to Gate" issue. Trying to identify what SWIM services could help and how.
2.1.2 Rob will be presenting a topic called "Reduced Delays Through Early Scheduling"
2.1.3 Focus group supporting development of the Operational Context and Use Case documents will report out
2.1.4 Special Topic: Tower Flight Data Manager (TFDM) Terminal Publication Service (TTP) will be presented
2.1.5 Producer focus: Aeronautical Information Management (AIM) will present
2.1.6 Introductions around the conference room

2.2 Felisa discussed the amount of work that went into the case studies
2.2.1 Challenges others to get involved with case studies – many benefits to groups and others

2.3 Rob Goldman presents Delta's case study
2.3.1 Discussion about Time Based Flow Management (TBFM). Reviews brief executive summary
2.3.2 Design of TBFM was to take delay and push it to the ground. We found out it was a bit too much of a delay for close-in city pairs within Atlanta Center (ZTL) specifically.
2.3.3 Reviews timeline of TBFM implementation
2.3.4 Discusses how the use of data can reduce taxi time delay
2.3.5 Able to show the delay reduction benefits of pre-scheduling a TBFM flight
2.3.6 Dave Almeida discussed ATM Systems View for the (Corresponding to slide 14)
2.3.6.1 Five minutes of ground delay improvement, drive a significant business case
2.3.6.2 What data is available in Legacy Systems versus what is available in SWIM?
2.3.6.3 Operational Context and Use Cases documents also support understanding of the data and how it can be best used for operations
2.3.7 Discussion about Delta's Traffic Management Tool incorporating live TBFM data

2.4 SWIFT website will be moving before the November meeting. Changing soon; will be sending notification to the SWIFT email group

3 SWIFT: Seeking Operational Improvements (Corresponding to slide 18)

3.1 SWIFT Aviation Case Study: "Taxi out, Return to Gate."

3.2 Review of executive summary
3.2.1 Review of issues & relevant tools
3.2.2 Discussed exercise performed to map data to underlying systems in operation
3.2.2.1 Try to identify the types of systems involved in the business process
3.2.2.2 Review of operational business process (Corresponding to slide 22)
3.2.3 Discussed what is required to get earlier notification of expected delays and what operations will change with alternative vignettes (Corresponding to slide 24)

3.2.4 The case study considered what information this data

3.3 Trying to identify the range of possibilities that exist now that you're informed about the SWIM capabilities

3.4 What are the operational metrics that will help you drive your business case?

3.4.1 Trying to connect the problem to SWIM operations

3.5 Dave Almeida introduced Brenden Hedblom (Thales)

3.6 Brenden Hedblom presented "Operational Metrics, SWIFT Debrief"

3.6.1 Provided overview of SWIM data and background of Thales and how they consume data.

3.7 Brendan introduced Franco Basti (Thales) to provide more detail

3.8 How to translate fields into actionable information that can create a future position. They are creating a report with an example and pave the way (or create a tool) to demonstrate improvement.

3.8.1 Solution

3.8.2 Methodology

3.8.3 Business Rules

3.8.4 Benefits

3.9 More insight into weather delay modeling may be a good candidate for a case study

3.10 Thales is identifying the metrics that can be derived from SWIM data

3.11 SWIM data can be used to provide micro-services

3.12 There are many factors that impact delays that the FAA does not have data on, i.e. airline operational data

15-minute break

4 SWIFT Demo: SWIM Widgets

4.1 Jay Zimmer (LST), presentation on visual data (linked from Amazon AWS)

4.2 **Action to be Taken: Will the special topic on NOD in November include discussion of specific data elements available in SWIM?**

4.3 SWIFT Widgets is a means to presenting the same information to decision makers in different ways

4.4 Used Flight Data Information Service (SFDPS) data to create representative SWIM widgets related to "Taxi Out, Return to Gate" Case Study

4.5 Presented mock-ups of notional widgets could look like if other services were ingested.

4.6 Different sources of data in the NAS provide different data for seemingly the same event

4.6.1 Timing of the data impacts this

4.6.2 Start and end points of measurement impacts this

4.7 The SWIFT team will present a mediation case study in a future meeting.

4.7.1 Mediation - participants systems transforming information services provided by SWIM into customized outputs

5 Operational Context and Use Case Documents

5.1 Stuart Wilson (LST), provided brief overview of what is available in Operational Context and Use Case document; understanding what data elements are available and the context behind the information.

5.2 Released an Operational Context and Use Case document for 5 SWIM Services: STDDS – SMES; TFMS Flow; TFMS Flight; TBFM; SFDPS Flight
5.3 Current schedule: New documents are developed each month. Users have one month to respond to feedback
5.4 Jay Zimmer (LST), discussed feedback received on the way the TBFM Operational Context Document was written and how those changes will be applied to future documents
5.5 Discussed Flight Data Information Service (SFPDS) Airspace Preview feedback
5.6 Discussed Flight Data Information Service (SFDPS) Airspace Messages
5.7 SMEs participate in the development of the Operational Context documents
5.8 Requested improvements to operational context document is retroactive. The documents are continually being updated.
5.9 A new document is developed every month
5.10 SWIFT Participants have a month to review documents and provide feedback
5.11 All documents are on the SWIFT website
5.12 In monthly meetings:
5.12.1 Current Ops Context/Use Case is reviewed
5.12.2 Next Ops Context/Use Case is presented
5.13 Stuart Wilson presented TBFM Ops Context/Use Case document
5.13.1 Discussed process of collecting inputs
5.14 Presented SFDPS Airspace document
5.14.1 Previewing documents allows FAA to tailor Ops Context/Use Case documents to the needs of the participants

Break for lunch (1 hour)

6 Terminal Flight Data Manager (TFDM) SWIM Data Publications Primer

6.1 Presented by Eric Van Brunt (Leidos)
6.2 Reviewed Configuration (Corresponding to slides 49, 50)
6.2.1 Discussed Configuration A (Full set of TFDM capabilities) and B (Partial Set of TFDM capabilities)
6.2.2 Configuration B has a wider distribution to airports
6.2.3 Build 1 and Build 2 are separated by 1 ½ - 2 years
6.3 There are 89 airports with 89 TFDM systems (each airport has its own TFDM)
6.4 TTP data is currently being published as part of the "Charlotte Trials"
6.5 As each TFDM system become operational, the TTP data will be published for that airport
6.6 Installed at 81 airports and 93 towers
6.7 Includes airport surface domain
6.8 Introduced SWIM elements

10-minute break

7 Aeronautical Information Management Modernization (AIMM)

7.1 Bob McMullen reviewed information and data
7.2 Provides data in a single source. Information is delivered via SWIM

7.3 Presented AIMM Segment 2 / Aeronautical Common Services (ACS)
7.4 Focuses on data feeds
7.5 Now providing aeronautical data in addition to aeronautical products
7.6 Connects directly to data sources
7.7 Reviewed AIMM Segment 2 / ACS
    7.7.1 Ingestion
    7.7.2 Integration
    7.7.3 Dissemination
7.8 Davy Andrew reviewed AIMM Segment 3.
    7.8.1 Increases NAS efficiency and safety access by improving the quality of data and enabling near-real-time data processing
7.9 Data provided in FIXM, WXXM, and AIXM formats – meets international standards.
7.10 Segment 3
    7.10.1 Now starting
    7.10.2 Focuses on NAS Automation Systems
    7.10.3 Final Investment Decision is expected end of 2019

8 Parking Lot Notes

8.1 Not on same page regarding EOBT
8.2 TBFM "Ready Time" could be very important to support Delta use case
    8.2.1 Note: TFDM EOBT linkage?
8.3 Data in legacy systems that are candidates for SWIM
8.4 Ops metrics: Lessons learned and methods to be presented in November
8.5 NOD – data elements "deep dive" to be included as part of the November meeting
    8.5.1 The NOD discussion should include Business rules driving the application
8.6 Life of a flight approach in ops context
    8.6.1 Approach SFDPS A/S discussion
8.7 Vendor/BGa
    8.7.1 Req/Rep functionality (use cases)
8.8 Case study at Business/General Aviation – Ernie Stellings, Rune Duke (High)
8.9 How producers feed the SWIM.
    8.9.1 B12 SUCS – "data chain"

9 Summary & Next Meeting

9.1 Next meeting will be held November 2018 in Washington, DC
9.2 Dave Almeida asked the Vendor Community what they are looking for. Responses:
    9.2.1 Develop Use Case on vendor community
    9.2.2 Consider creating a separate vendor community focus group
    9.2.3 More diagram of how the producer systems feed the SWIM services
        9.2.3.1 Sequence of source to final data
    9.2.4 Next SWIFT:
        9.2.4.1 Southwest Airlines and Delta Airlines Case Studies
        9.2.4.2 Operational Metrics Deep Dive
        9.2.4.3 Sample Tool Demonstration (NOD)
        9.2.4.4 Global SWIM Strategy from FAA perspective

9.3 Felisa asked for individuals to send along any additional topic suggestions for the November meeting
9.4 Meeting adjourned at 3:30pm

Appendix A: SWIM Industry - FAA Team (SWIFT) Meeting #4 – August 15, 2018

David Almeida, LST	Brenden Hedblom, Thales	Tim Niznik, American Airlines
Davy Andrew, FAA	Michael Huffman, FAA	Frank Oley, Airlines for America (A4A)
Franco Basti, Thales	Mike Jagmin, United	Mark Parra, Noblis
Joseph Bertapelle, JetBlue	Roger Jones, Delta Air Lines	Susan Passmore, FAA
Kristen Beverly, LST	Dennis Krisczy, FAA	Sherri Roberts, UPS
Rachael Bonville, SaabSensis	Jana Lane, Southwest Airlines	Tim Rudolph, FedEx
Al Capps, NASA	Brian Leaton, Thales	Bill Sperandio, Southwest Airlines
Kathryn Crispin, American Airlines	Steve Link, Harris	Ernie Stellings, National Business Aviation Association (NBAA)
Jeff Darnell, Southwest Airlines	Sarah Lowe, Evans	Lisa Sullivan, Harris
Rune Duke, AOPA	Justin Lonie, FedEx	Daniel Torres, FedEx
Todd Emo, Noblis	Marcus Lowther, Metron Aviation	Eric Van Brunt, Leidos
Robert Fornaro, American Airlines	Eric Lunstrum, LST	Unni Vellanikaran, SeaTec
Dan Greenbaum, Mitre	Frank Matus, Thales	Anuja Verma, Mitre
Kenneth Gochenour, Jeppesen	Bob McMullen, FAA	Sheila Wentz, Southwest Airlines
Rob Goldman, Delta Air Lines	Ronald McQueen, LST	Felisa White, FAA
Shawn Gorman, NASA	Barbara Mebane, Southwest Airlines	Derek Wickens, FedEx
Thomas Green, ARINDirect	Teresa Mendes, Noblis	Stuart Wilson, LST
Jeri Groce, FAA	Shane Miller, Mitre	Jay Zimmer, LST
Josh Gustin, FAA	Alex Murray, Noblis	