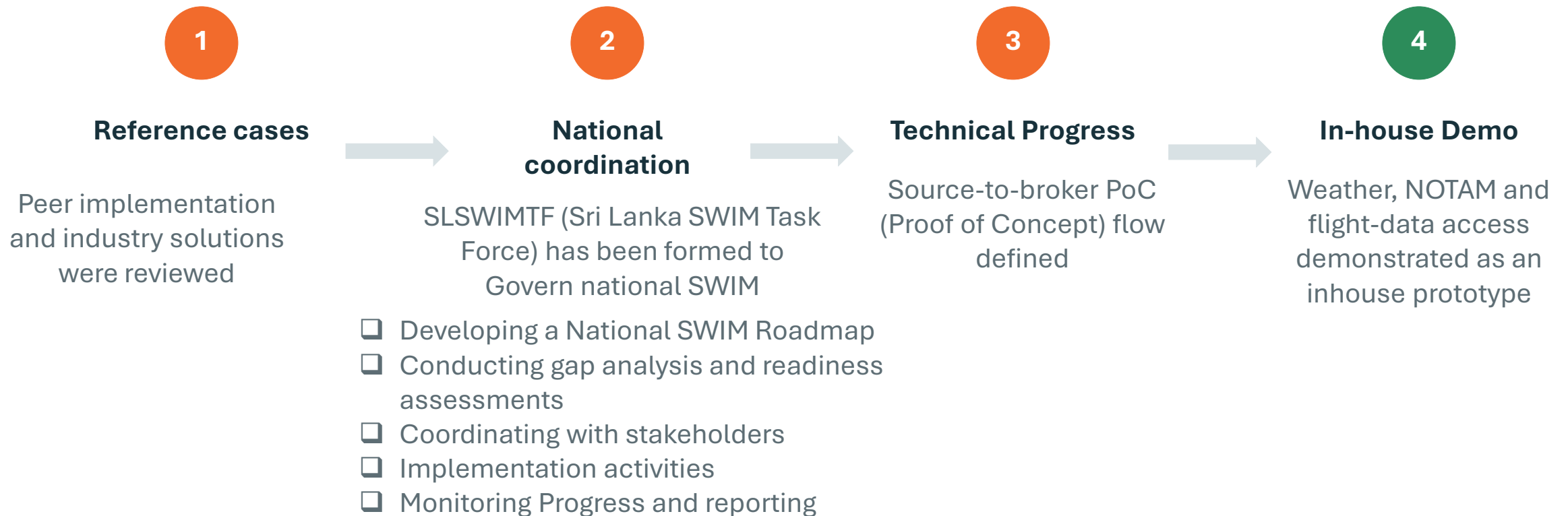


SWIM Planning and Implementation Updates of Sri Lanka

Presented at ICAO APAC SWIM Training & Workshop
25-27 August, Vietnam

Structured National Program



Sri Lanka now has a governance mechanism, a defined PoC and internal prototype evidence.

APAC Self-Assessment

Planning criterion	Status	Score
Use-case development	Not implemented	0
Stakeholder mapping	Partial	0.5
Gap analysis	Partial	0.5
Service identification	Not implemented	0
TI design	Partial	0.5
Governance framework design	Not implemented	0

ICAO APAC SWIM Indicators Scoring Criteria

Not Implemented	- 0
Partially Implemented	- 0.5
Fully Implemented	- 1

Planning readiness = 25%

APAC Self-Assessment

Preparation / Planning



25%

3 of 6 criteria partially implemented

Engineering buildup / testing



8%

One way data stream with an API established for testing

In operation



0%

No trial service, discovery or executed governance yet

Baseline: 25% planning readiness and 8% engineering buildup/testing

Technical Foundations that are in Place

01

CRV

Common regional connectivity is already implemented.

02

Internal Connectivity Across Systems

SWIM Server aggregates data across multiple systems

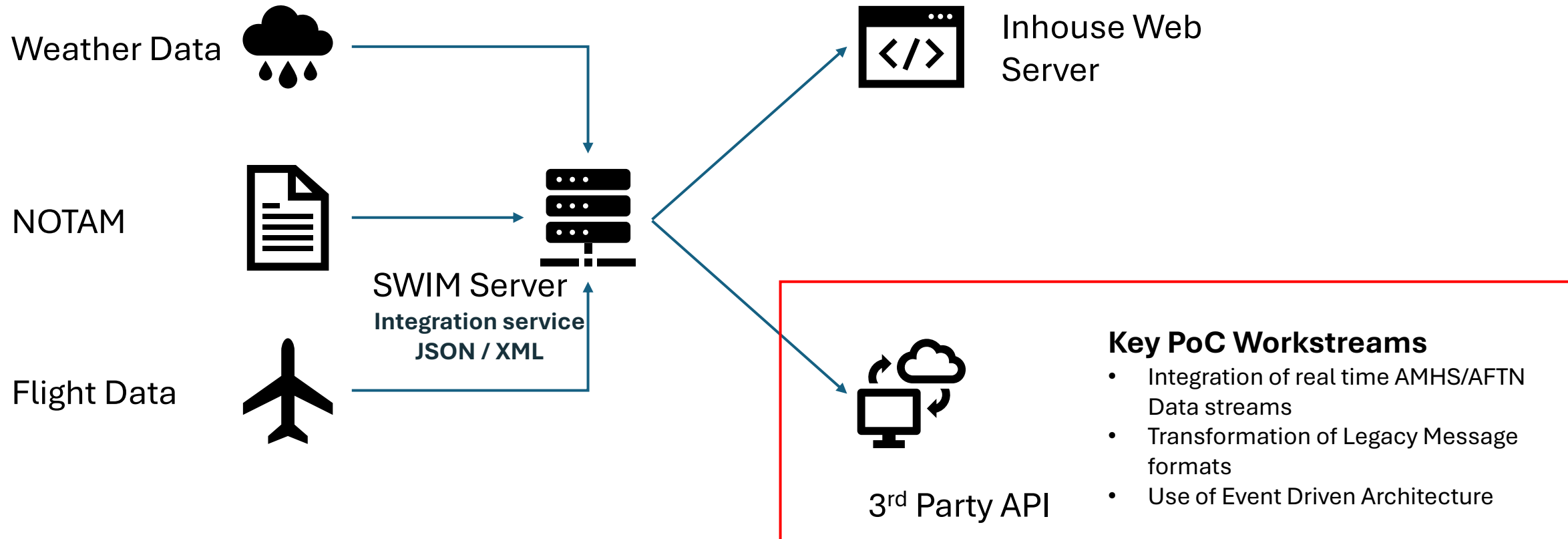
03

Data Formats

Updated data formats are available

- AIXM 5.1.1
 - IWXXM 3.0
- legacy formats are converted via the SWIM Server.

Sri Lanka SWIM Architecture – Phase 1



Developing an AASL SWIM Interface with API Access

 **SWIM**
SYSTEM WIDE INFORMATION MANAGEMENT

• Live

○ Kafka ✓ 18996 sent

SWIM Integrated Terminal Weather Service

SWIM Aeronautical Information NOTAM Service

SWIM Flight Data Service

Filter METARs... (ICAO, wind, cloud, remarks)

100 reports

ICAO	Observed	Wind	Visibility	Clouds	Temp/Dew	QNH	Remarks	Received
VCBI	08 Jul 2026, 18:10 UTC	SW 8KT	10 km or more	SCT1700	28°/26°C	1010	NOSIG	23:40:35
VCRI	08 Jul 2026, 18:10 UTC	W 5KT	CAVOK	NSC	28°/23°C	1010		23:38:47
VCRI	08 Jul 2026, 17:10 UTC	0		NSC	0°/0°C	0	NIL	22:51:07
VRMM	08 Jul 2026, 17:00 UTC	W 11KT	10 km or more	FEW1800	29°/27°C	1012	NOSIG	22:51:07
VCBI	08 Jul 2026, 17:10 UTC	WSW 8KT	10 km or more	SCT1700	29°/25°C	1011	NOSIG	22:51:07
VCBI	08 Jul 2026, 17:10 UTC	WSW 8KT	10 km or more	SCT1700	29°/25°C	1011	NOSIG	22:40:57
VCBI	08 Jul 2026, 16:40 UTC	SW 8KT	10 km or more	SCT1700	29°/26°C	1011	NOSIG	22:12:01
VCBI	08 Jul 2026, 15:40 UTC	SW 7KT	10 km or more	SCT1700	29°/26°C	1010	NOSIG	21:11:02
VCBI	08 Jul 2026, 14:40 UTC	SW 7KT	10 km or more	BKN1700	28°/26°C	1010	NOSIG	20:12:19
VCRI	08 Jul 2026, 14:10 UTC	WSW 14KT	CAVOK	NSC	30°/22°C	1009		19:52:00
VRMM	08 Jul 2026, 14:00 UTC	W 10KT	10 km or more	FEW1800	30°/27°C	1010	NOSIG	19:52:00
VCBI	08 Jul 2026, 14:10 UTC	SW 7KT	10 km or more	SCT1700	29°/26°C	1010	NOSIG	19:52:00

SWIM Integrated Weather Data

Developing an AASL SWIM Interface with API Access

 **SWIM**
SYSTEM WIDE INFORMATION MANAGEMENT

• Live

○ Kafka ✓ 18996 sent

SWIM Integrated Terminal Weather Service

SWIM Aeronautical Information NOTAM Service

SWIM Flight Data Service

Filter NOTAMs... (number, aerodrome, FIR, text)

100 NOTAMs

NOTAM #	Type	FIR	Aerodrome (A)	Valid From (B)	Valid To (C)	Lower (F)	Upper (G)	Description (E)	Received
J2846/26	NOTAMN	LTAA	LTCT	2607090530	2607090600	SFC	200FT	VOR/DME GDR 117.7MHZ/CH124X, DME PART U/S.) pbbpbbpABC055 090519 GG VCBIZRZX 090527 WMKKYNYM (D0827/26 NOTAMN Q) WBFC/QWALW/IV/M /AE/000/999/0517N11515E005 A) WBKL B) 2607251400 C) 2607251500 E) FIREWORK DISPLAY WILL TAKE PLACE WITHIN 0.5NM OF LABUAN SEA SPORT AREA CENTERED AT COORD 051628N 1151523E	10:5
A1486/26	NOTAMN	LZBB	LZPP	2607090630	2607091000			TWY B CLSD.	10:4
N3004/26	NOTAMC	RJJJ	RJSM	2				ILS-LOC,GP FOR RWY 10 NEW NOTAM TO FLW	10:4
J5475/26	NOTAMN	VTBB	VTBB	2607090515	2607091000	GND	19000FT	ROCKET (BANGFAI) FRNG WILL TAKE PLACE RADIUS 5NM CENTRE 152854.56N1041514.19E (MAHA CHANA CHAI DISTRICT YASOTHON PROVINCE) RMK: COOR CTC TEL +669 2915 0807, +666 5113 5648	10:4
P3322/26	NOTAMN	RJJJ	RJJJ	2607122100	2607171300			WEST OF TOHOKU TEMPO TRAINING AREA ACT AS FLW, NAME/ID ALT NR.1 SFC/UNL NR.2 SFC/UNL RMK: REF AIP SUP 139/26	10:4

SWIM Integrated
NOTAM

Developing an AASL SWIM Interface with API Access

 **SWIM**
SYSTEM WIDE INFORMATION MANAGEMENT

• Live

0 Kafka ✓ 18996 sent

SWIM Integrated Terminal Weather Service

SWIM Aeronautical Information NOTAM Service

SWIM Flight Data Service

Filter flights... (callsign, ADEP, ADES, type)

100 messages

Type ▾	Callsign ▾	A/C Type ▾	ADEP ▾	EOBT ▾	ADES ▾	DOF ▾	Route ▾	Received ▾
FPL	AL K140	A320	VOMD	1000	VCBI	260709	-N0410F250 DCT MDI M641 BIKOK BIKOK1A	10:48:28
FPL	AL K140	A320	VOMD	1000	VCBI	260709	-N0410F250 DCT MDI M641 BIKOK BIKOK1A	10:46:42
FPL	AL K140	A320	VOMD	1000	VCBI	260709	-N0410F250 DCT MDI M641 BIKOK BIKOK1A	10:46:40
FPL	UA F5CL	A388	YSSY	1045	OMDB	260709	-N0485F320 DCT KADOM H44 BORLI J21 WHA/N0483F340 J149 CDU A585 BEZZA/N0489F360 A585 PD N509 TATOD/N0487F380 N509 ELATI N640 PIMOG/N0484F400 N640 KAT R461 DEMON/M084F400 R461 MDI M300 MESAN/M085F430 M300 LOTAV/N0484F430 M300 EMURU P570 ITURA M762 VELOD/N0416F260 M762 TAPRA/N0385F220 M762 MIVEK P574 IMPED	10:39:18
FPL	4F LWB	C152	VCCC	0430	VCCC	260709	-N0085A035 RM DCT KAT DCT RM	10:38:37
FPL	AL K127	A320	VCBI	0800	VOMM	260709	-N0451F340 ATETA1D ATETA T4 TTR/N0457F350 R457 TEGUT	10:38:17
FPL	AL K308	A333	VCBI	0645	WSSS	260709	-N0475F350 DUDAL1D DUDAL DCT VEVET P570 TEBIT/N0474F370 P570 SULEN/M081F370 P570 MABIX/N0472F370 P756 ISVUR/M081F370 N563 SALAX/N0470F370 Y340 BATAR A464 ARAMA DCT TEBUN	10:29:56
FPL	AL K308	A333	VCBI	0645	WSSS	260709	-N0475F350 DUDAL1D DUDAL DCT VEVET P570 TEBIT/N0474F370 P570 SULEN/M081F370 P570 MABIX/N0472F370 P756 ISVUR/M081F370 N563 SALAX/N0470F370 Y340 BATAR A464 ARAMA DCT TEBUN	10:25:22

SWIM Integrated Flight Data Service

Developing an AASL SWIM Interface with API Access

```
← ↻ 🏠 ⚠ Not secure /api/latest
Pretty-print ☒
[
  "Q)ZSHA/QIDAK//M//000/999/",
  "A)ZSYN B)2607090511",
  "E) CNL NTM.",
  ")",
  "p\u0001ABC040 090512",
  "GG VCBIZRZX",
  "090512 RJAAYNYX",
  "(P3321/26 NOTAMN",
  "Q)RJJJ/QRMCA/IV/BO/W/000/999/3310N14118E999",
  "A)RJJJ B)2607122200 C)2607171200",
  "D)2200/1200",
  "E)EAST OF TOHOKU TEMPO TRAINING AREA ACT AS FLW, s\u0005\u0015%Q;!\u25c0PŠ",
  "NR.1 SFC/FL270",
  "NR.2 SFC/FL270",
  "NR.3 SFC/9000FT AMSL",
  "NR.4 SFC/FL270",
  "NR.5 SFC/11000FT AMSL",
  "RMK: REF AIP SUP 052/26)",
  "ABC041 090513",
  "GG VCBIZRZX",
  "090512 RJAAYNYX",
  "(N3003/26 NOTAMC N2979/26",
  "Q)RJJJ/QICAK/I/NBO/A/000/999/4042N14122E005",
  "A)RJSM B)2607090507",
  "E)ILS-LOC,GP FOR RWY 28 RESUMED NML)",
  "p\u0001ABC042 090513",
  "GG VCBIZRZX",
  "090521 WMKKYNYM",
  "(D0826/26 NOTAMN",
  "Q) WBFC/QWULW/IV/BO /W /000/999/",
  "A) WBFC B) 2607180100 C) 2610110700",
  "D) DLY 0100-0700",
  "E) UA ACT WILL TAKE PLACE WI THE FLW COORD",
  "060307.58N 1164244.86E - 060305.13N 1164606.43E -",
  "055943.98N 1164606.49E - 055944.72N 1164244.38E",
  "(RANAU,KOTA KINABALU SABAH)",
  "F) SFC G) 400FT AGL)",
  "üþ\u0001ABC043 090513",
  "GG VCBIZRZX",
  "090512 EUECYIYN",
  "(A1485/26 NOTAMN",
  "Q) LZBB/QFFCH/IV/NBO/A /000/999/4904N02014E005",
  "A) LZTT B) 2607090615 C) 2607091700",
  "E) AD CAT FOR FIRE FIGHTING UPGRADED TO CAT 7.)",
  "üþüþüþüþüþüþüþüþü\u0001ABC044 090515",
  "GG VCBIZRZX",
  "090515 YBBBZEZX",
  "(H5554/26 NOTAMN",
```

API Stream

Governance

Internal PoC

Internal providers
Internal consumers
Controlled test data
No operational
dependency

GOVERNANCE
GATE



External participation after controls mature

- ✓ Data ownership & quality
- ✓ Cybersecurity
- ✓ SLA, QoS & monitoring
- ✓ Identity & access control
- ✓ Service onboarding / offboarding
- ✓ Lifecycle & dispute management

Regional Collaboration Accelerates Interoperability

Sri Lanka can contribute

- CRV / Edge EMS test participation
- AIXM and IWXXM preparation cases
AIXM 5.1.1 and IWXXM 3.0 available
- System Integration and Conversion Lessons and information sharing
- Transparent maturity and governance findings

Regional collaboration sought

- Common service descriptions and topic conventions
- Core Gateway / Edge EMS interface guidance
- Joint testing through SIPG
- Coordination on FIXM maturity and transition

Gaps and Future Actions

Observed gap

Planned control

One-way data flow



Validate bidirectional patterns before operational use

No implemented redundancy



Plan resilient deployment and contingency modes

Standardization still in progress



FIXM transformation and validation

Governance and access controls in progress



Approve controls before onboarding external users

Regional interfaces are still evolving



Build national capability while monitoring APAC convergence

The Roadmap

2026

Foundation

- Testing with supporting data formats
- PoC build and verification
- National maturity roadmap

2027–2028

Controlled expansion

- Testing with broader formats and systems
- Governance and security policies
- External PoC, CRV and SIPG readiness

2029–2030

Operationalization

- FIXM capability with new ATM
- Operational SWIM infrastructure
- APAC integration when ecosystem is mature

Thank you