

CHINA INITIAL SWIM PROJECT OVERVIEW

ATMB, CAAC

May, 2016

Bangkok, Thailand

Content



- Growth of Air traffic in North China
- North China regional TFM
- Initial SWIM project

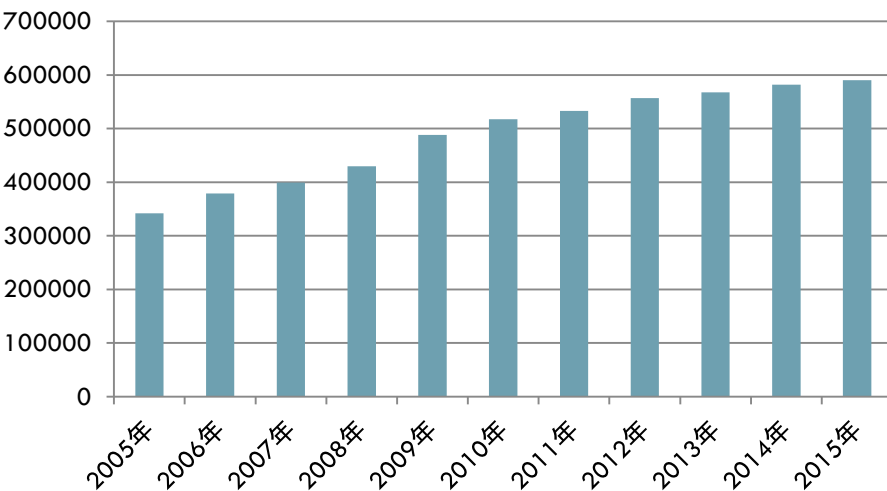
Background

□ Growth of Air Traffic in China

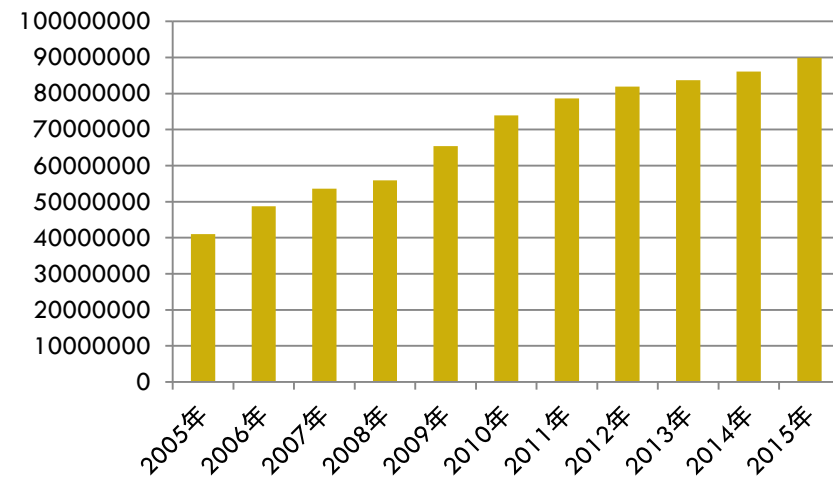
□ 1,785,613 flights in Beijing FIR in 2013

□ Beijing Capital International Airport(ZBAA)

飞行起降架次
Total Movements
ZBAA



旅客吞吐量
Passengers
ZBAA



North China Regional TFM System

integrated CDM process

飞行计划窗口

计划日期: 当日 方向: 全部 筛选: 离港 飞越 进港 区内飞行 其它 视图: SCH FPL RDV TAX QUE CNT P&S UNC DEP ARR FIN 其他 本场训练

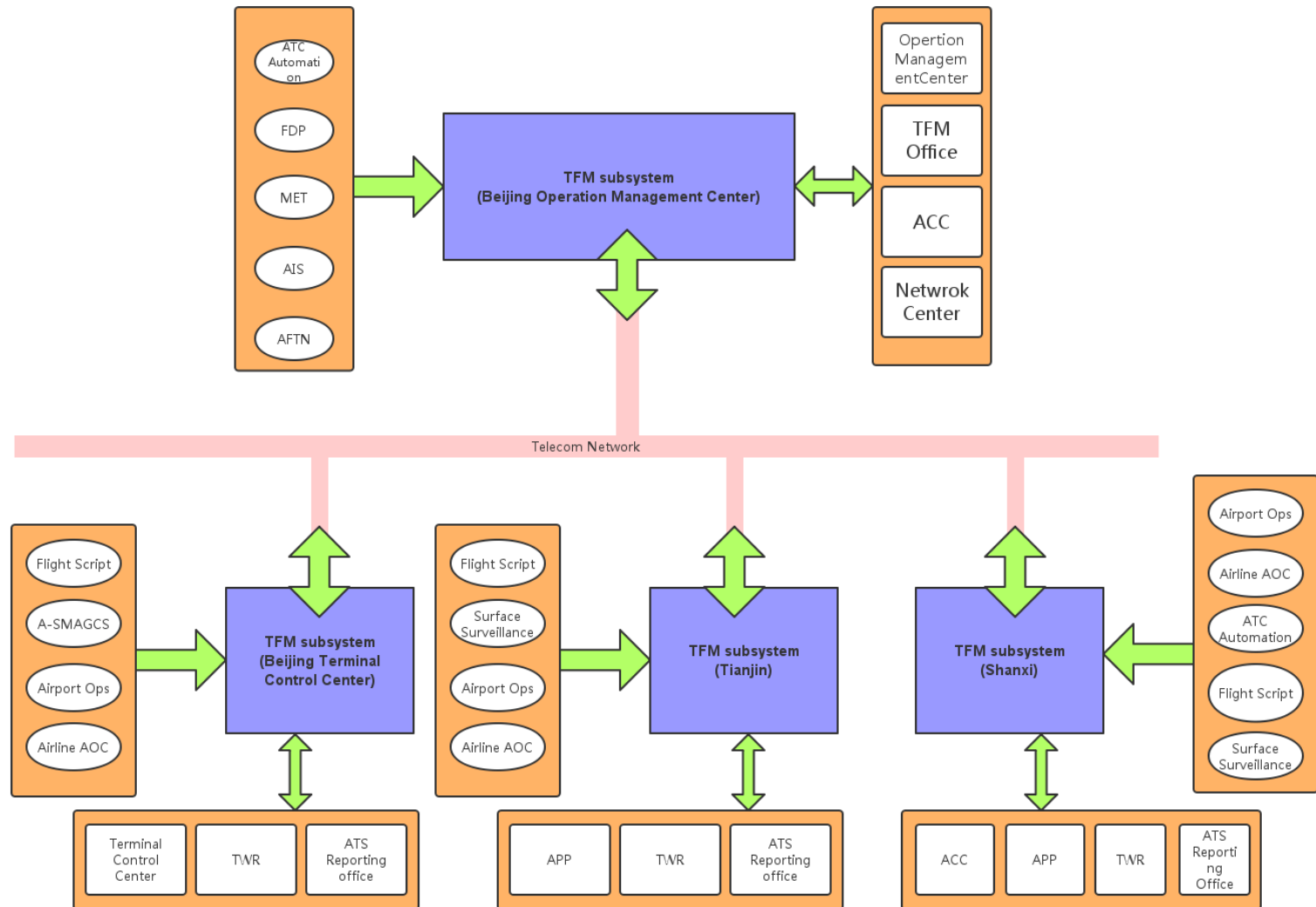
航班号: 起飞机场: 降落机场: 多选 专享 计划打印 报表查询

序号	决控信息	航班号	跑道	机型	计划状态	起飞机场	降落机场	STD	EOBT	TOBT	TSAT	COBT	ASAT	CTOT	ATOT	计划降落	FPL降落	实际降落	走廊口	航路
117	★	CCA985	01	B77W	UNC	ZBAA	KSFO	16:00	16:00	16:00		15:52	16:39	16:34	03:20	03:42		YV	B3	
118	●	★	CES5183	36R	A320	DEP	ZBAA	ZSPD	16:20	16:20	16:20		16:26	17:12	17:07	18:45	18:42		LADIX	A5
119	★	CCD8906	01	B738	ARR	ZBAA	ZYTL	16:40	16:40	16:40		16:42	17:02	17:02	18:05	17:53		LADIX	A3	
120	●	★	CSC8832	36R	A321	DEP	ZBAA	ZUCK	16:50	16:50	16:50	16:50	16:51	17:08	17:09	19:50	19:40		SOSDI	G2
121	●	★	CCA1503	01	A321	DEP	ZBAA	ZSNJ	17:50	17:50	17:50	17:50	17:41	18:05	17:56	19:45	19:28		LADIX	A5
122		CCA4105		A321	DEP	ZUUU	ZBAA	16:00	16:00					16:28	18:30	18:45			G2	
123		CSZ9530		B738	DEP	ZHCC	ZGNN	17:05	17:05					18:02	19:40	20:19				
124	●	★	CCA1527	34L	B737	DEP	ZBTJ	ZSSS	16:40	16:40	16:43	16:43		17:03	17:07	18:50	18:46		LADIX	A5
125	●	CSN6762		A321	DEP	ZYTX	ZHHH	16:05	16:05					16:31	18:45	19:02				
126		CCA1374		A333	DEP	ZGHA	ZBAA	16:00	16:00					17:09	18:25	19:12				A4
127		CCA1220		B738	DEP	ZLIC	ZBAA	16:20	16:20					17:30	18:15	19:06				A5
128	●	★	CCA1549	01	B748	UNC	ZBAA	ZSSS	16:30	16:30	16:30		16:28	16:43	16:44	18:40	18:20		LADIX	A5
129	★	CDG4607	13	B738	UNC	ZBYN	ZLLL	16:50	16:50	16:53	16:50		17:05	16:56	18:35	18:21				B2
130		CSZ9935	34L	A320	DEP	ZGSZ	ZBTJ	15:25	15:25					15:51	18:25	18:25				A4
131	●	CSN377	36R	A321	DEP	ZBAA	ZSAM	16:10	16:10				16:19	16:30	17:01	19:05	19:26		LADIX	H1
132	★	CCD1611	36R	B738	DEP	ZBAA	ZYHB	16:55	16:55	16:55	16:55	16:51	17:41	17:38	19:05	19:08		YV	B3	
133	★	CSC8568	34L	A320	DEP	ZBTJ	ZYHB	16:45	16:45	16:50	16:50		17:10	17:04	18:45	18:44				A3
134	●	★	CXA8102	36R	B752	UNC	ZBAA	ZSAM	16:00	16:00	16:00		15:58	16:19	16:29	19:00	18:59		LADIX	H1

飞行计划数: 1482

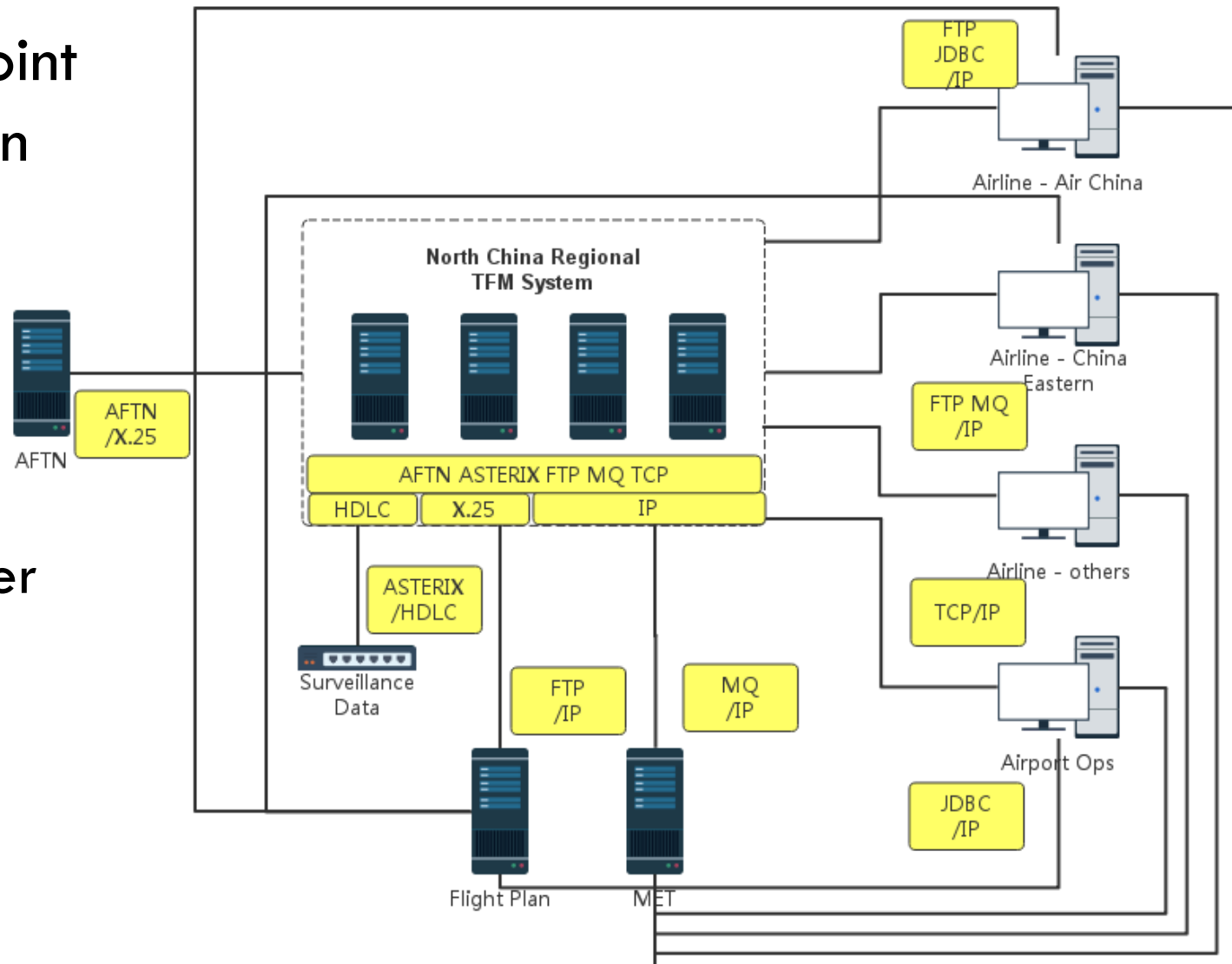


North China Regional TFM System



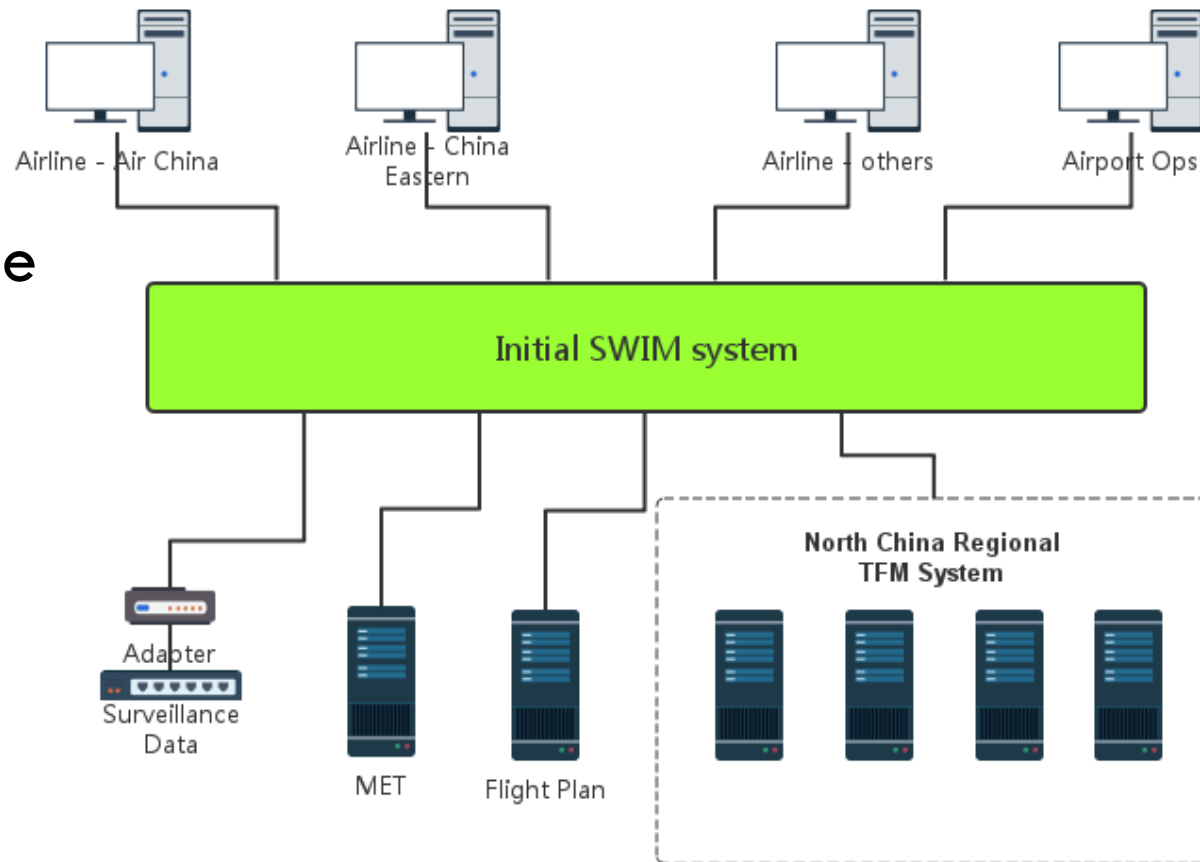
North China Regional TFM System

- Point-to-Point Information exchange
- Various Interfaces
 - ▣ Telecom
 - ▣ High layer protocol
 - ▣ Message type



Initial SWIM Project

- Demonstrate the capabilities of the initial SWIM platform
- Utilize near real time ATS/A-CDM messages, weather information and simulated position reports
- Phase 1
 - 2013-2015



Initial SWIM Project

- Current SWIM Services
 - ▣ Publish Flight information
 - Flight Plan in FPL2012 and FIXM 2.0 format
 - Surveillance information
 - A-CDM times in FIXM 2.0 format
 - EOBT TOBT COBT CTOT
 - TSAT ASAT ATOT
 - ELDT ALDT
 - SIBT EIBT
 - ▣ Provide Traffic Flow Information
 - Constrains
 - ATFM measures applied

Initial SWIM Project

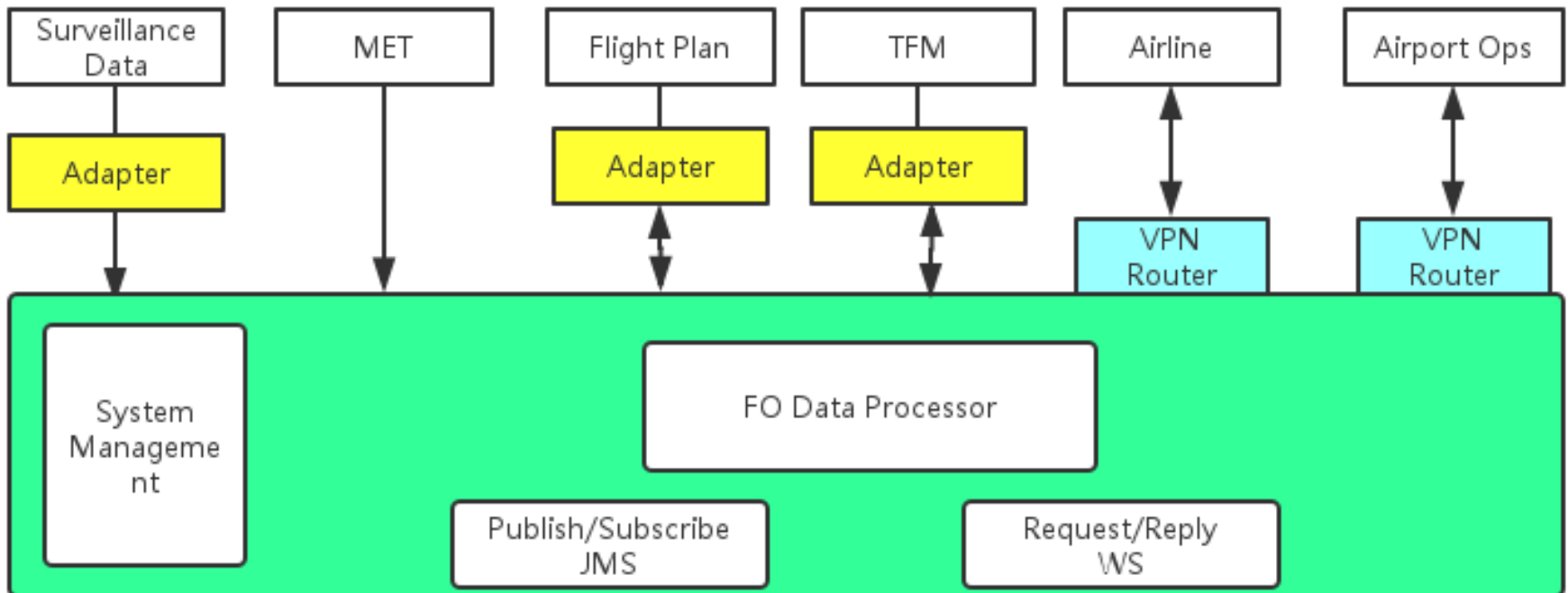
- Current SWIM Services
 - ▣ Provide weather information
 - Radar echo composite map
 - Thunderstorm forecast
 - ▣ Provide Gate/Spot allocation information
 - Gate/Spot allocation info
 - Boarding time/Gate closure time

Initial SWIM Project

- Messaging service pattern
 - ▣ Publish-subscribe
 - ▣ JMS messaging API
- Message type
 - ▣ Traditional message type
 - FPLS - Doc 4444
 - ▣ XML based message type
 - FIXM 2.0 – Flight data and A-CDM data
 - ▣ Image
 - Weather information

Initial SWIM Project

□ System Architecture



Initial SWIM Project

- Study on Globally Unified Flight Identifier (GUFI)
 - ▣ Requirements
 - ▣ Format
 - URN and UUID
 - ▣ Assignment
 - ANSP
 - ▣ Transition plan

Initial SWIM Project

- Phase 2 (2016 ~)
 - ▣ New services
 - Request-Reply messaging pattern
 - Web Service
 - Enhanced Flight and Flow data services
 - ▣ Adopt FIXM 4.0
 - GUF1
 - ▣ Study on IWXXM 1.0



Thank you !