



**INTERNATIONAL CIVIL AVIATION ORGANIZATION**  
A United Nations Specialized Agency



# Introduction of APAC FPP

Liu Lujiang



**All 9 Active members remain except Sri Lanka**



**12 User members as below, East Timor may be come back soon**



Lao



Malaysia



Cambodia



Myanmar



Pakistan



Sri Lanka



Vietnam



Fiji



Nepal



Maldives



Mongolia



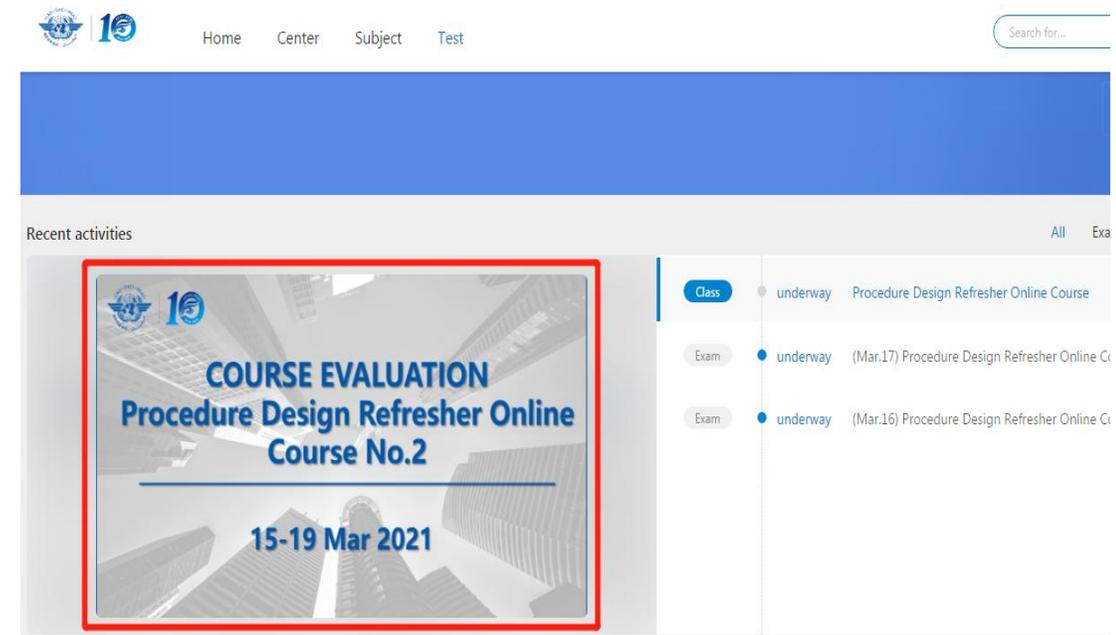
Papua New Guinea

## Consulting

The FPP in-house instructors assisted in flight procedures design/ground validation/consulting for **4** states/Administrations which include China mainland, Macao China, Nepal and Fiji in 2021.

## Training

**6** flight procedure design online training courses/workshop namely, PD **refresher** course, **PBN** PD course, PD **Quality Assurance** Workshop, **RNP-AR** workshop, **PD Seminar** and Pans-Ops PD **Initial** Course were provided to a total of **250 participants** from **24** States.

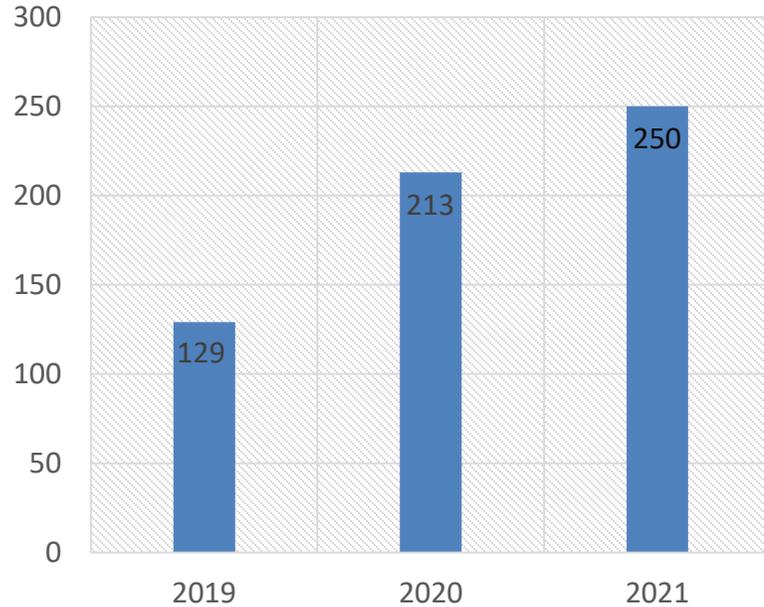


The screenshot shows a web portal interface. At the top, there is a navigation bar with 'Home', 'Center', 'Subject', and 'Test' links, along with a search bar. Below the navigation bar, there is a section titled 'Recent activities'. A prominent card is highlighted with a red border, displaying the following text: 'COURSE EVALUATION Procedure Design Refresher Online Course No.2 15-19 Mar 2021'. To the right of this card, there is a table with columns for 'Class', 'Exam', and 'Status'. The table shows three entries, all with a status of 'underway'.

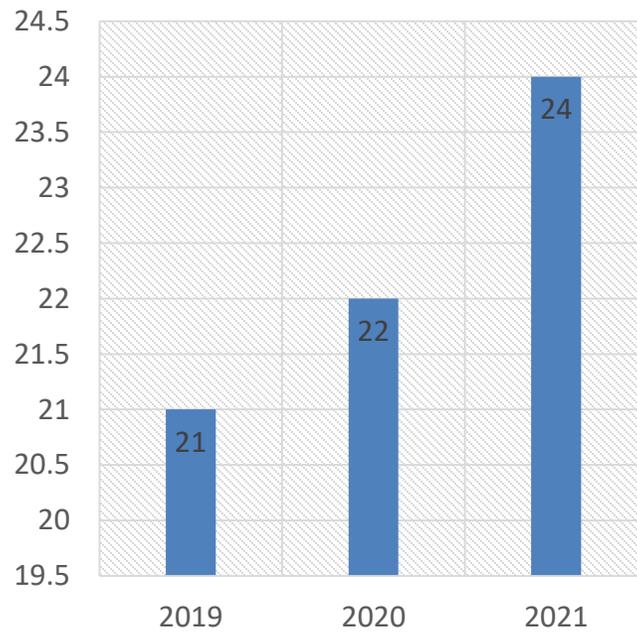
Class	Exam	Status
Procedure Design Refresher Online Course		underway
(Mar.17) Procedure Design Refresher Online Cr		underway
(Mar.16) Procedure Design Refresher Online Cr		underway

# Consulting and training Quantity Analysis

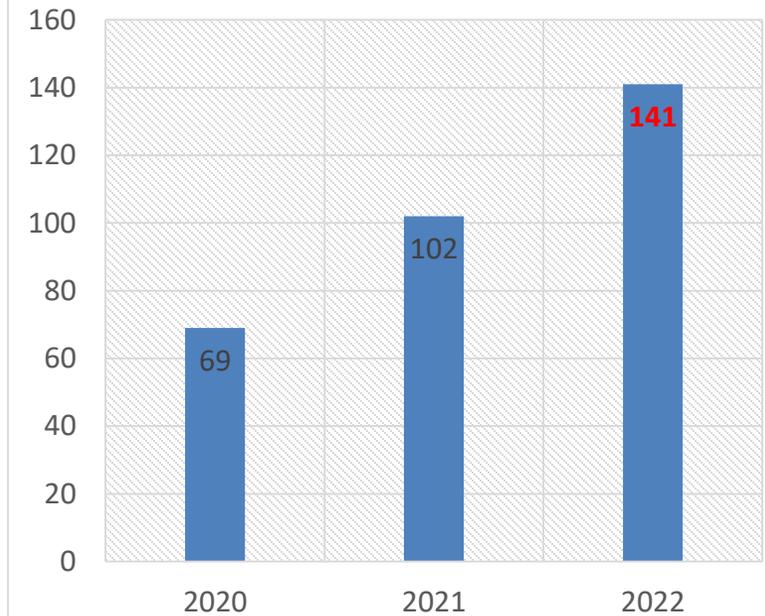
### No. of trainees



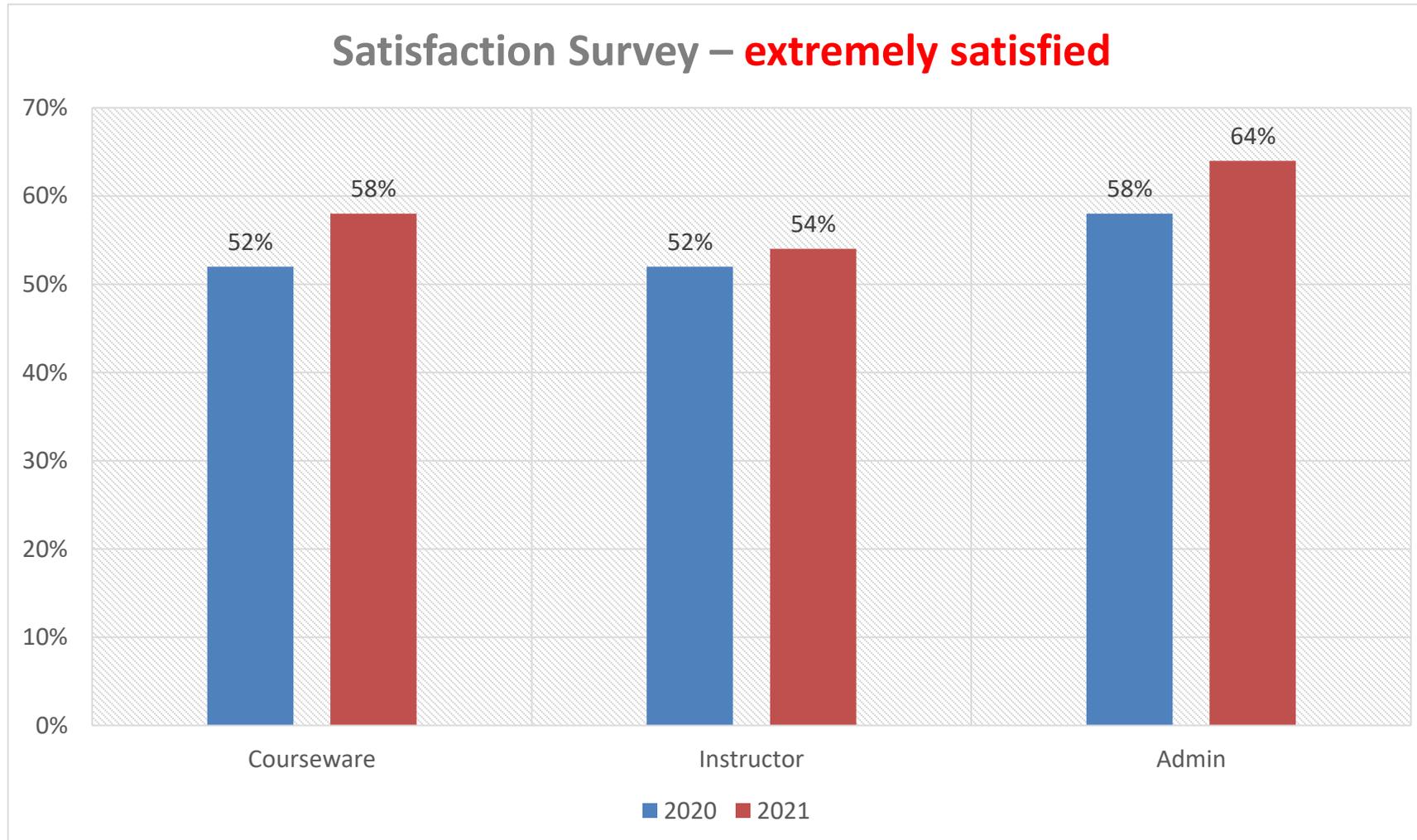
### No. of states



### Total hours of courses



# Consulting and training Quality Analysis

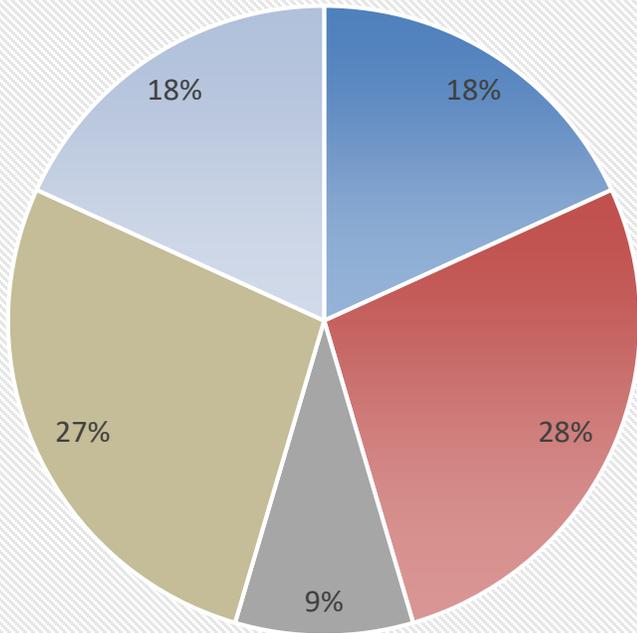


# Consulting and training Quality Analysis

Score for PBN PD course in 2021	Pre-training(No.)	After training(No.)
70-79	18	1
80-89	0	4
90-99	0	11
100	0	2

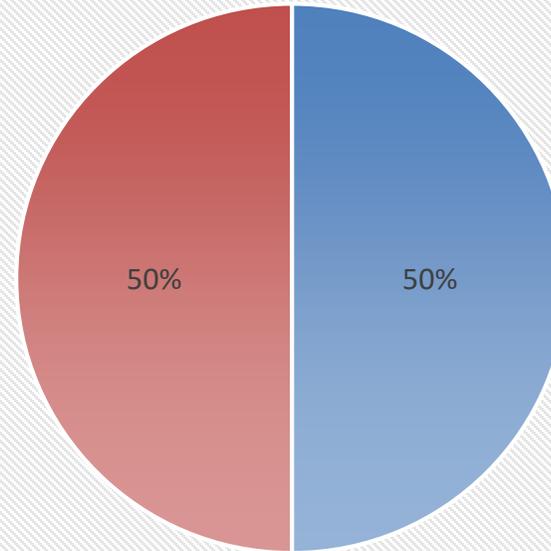
# Consulting and training Quality Analysis

### Job Position



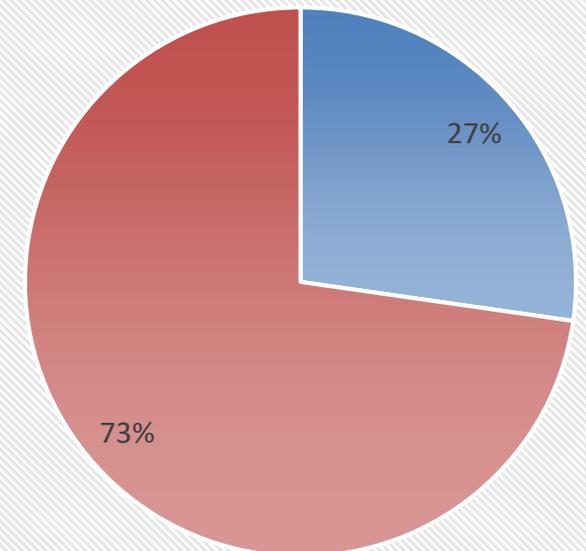
- Air Traffic Controller
- Flight Procedure Designer
- Pilot
- Regulator
- Other

### Continued to participate in flight procedure design after Previous training

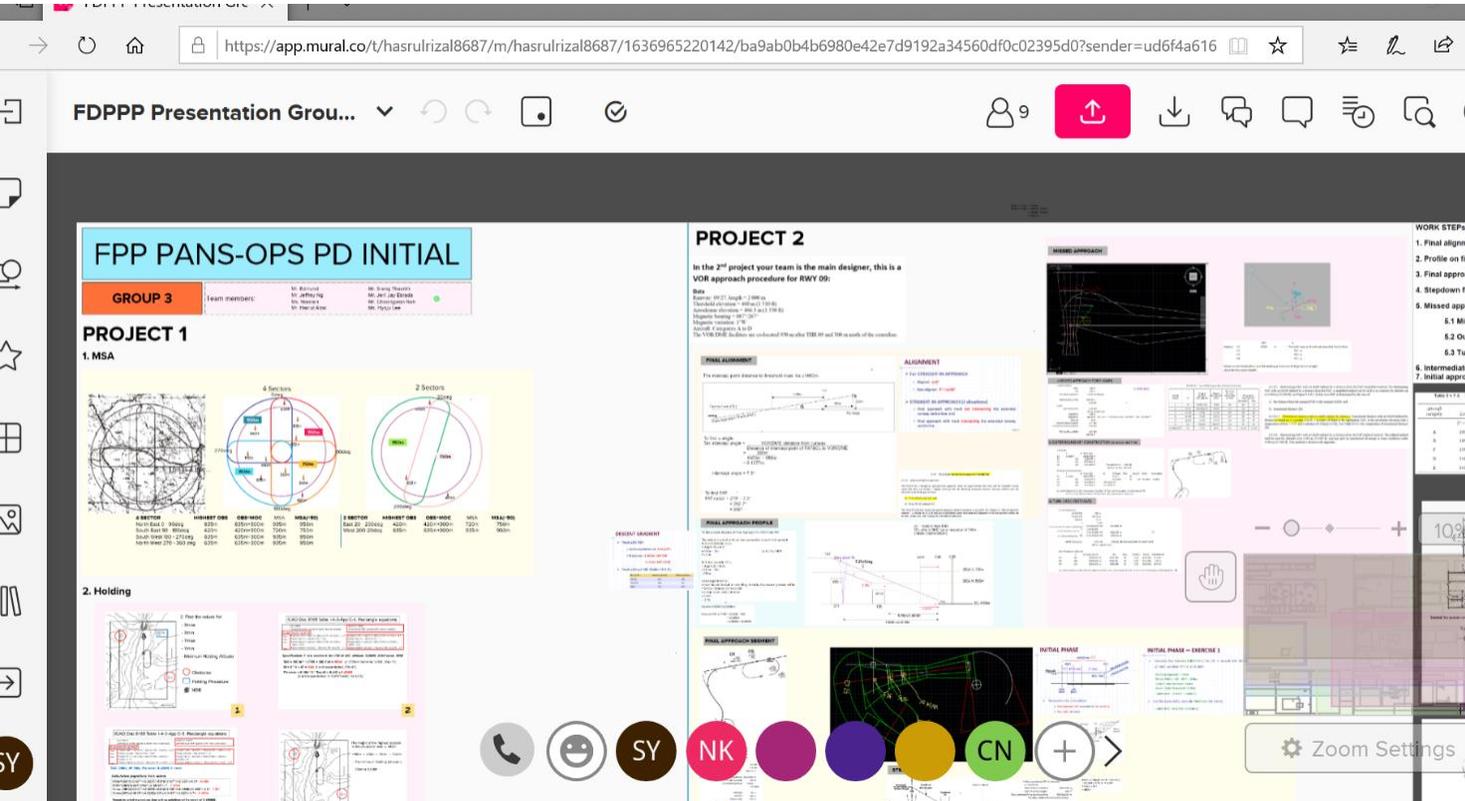


- NO
- YES

### Plan to participate in the flight procedure design after the training



- NO
- YES



**Software:** MS Teams/Mural

**Hardware:** Large LCD TV/100 megabit broadband network

(Quiz) RNP AR Online Workshop No. [red box]

单选题 (共26分)

1 2 3

多选题 (共74分)

本卷共12题, 总分100分

1. A RNP APCH application is published as RNAV(RNP) or RNP RWY XX.

A. For RNP APCH, RNP value is 1 NM between 50 NM from THR and the FAF.

B. For RNP APCH, RNP value is 0.3 NM in the final approach segment.

C. RNP 0.2 can be used in final segment for RNP APCH provided it has been clearly depicted on chart.

D.

2. When performing an APV RNAV(GNSS) Approach using Baro-VNAV function,

A. APV Baro-VNAV minima is displayed in the column for LPV in minima boxes.

B. In final segment, the pilot can descend with different slope from the one published.

C. Missed approach must be initiated before the MAPt of associated LNAV procedure.

D. None of the above.

3. Which ICAO Navigation specification(s) is/are usable for PBN approach application?

A. RNAV 5, RNAV1 and RNP 1.

B. RNP APCH, Advanced RNP and RNP AR APCH.

C. RNP APCH and RNP AR APCH only.

D. RNP APCH and Advanced RNP only.

多选题(共74分)

4. 1. Which sentences are right? Navigating according to RNAV method of navigation, the pilot can initiate a turn before a waypoint.

A. In this case, the waypoint is a Fly-by waypoint.

B. The turn initiation distance before the waypoint can vary.

C. It is necessary to publish a leading radial to indicate where to initiate the turn.

D. This could only be done if auto-pilot is available and engaged.

5. Which sentences are right?

A. This symbol means that A/C is assumed to overfly the waypoint.

B. A pilot can initiate a turn before a fly-over waypoint.

C. Most of the waypoints defining a procedure are defined as Fly-over waypoints.

D. MAPt in instrument approach procedure is always a fly-over waypoint.

Home **Center** Subject Test

Course Subject **Training** Exam

Personal center

Learning Center

My study ^

My study

My activities

My knowledge

My study bag

Learning files ^

My files

**My certificate**

Participating in i... ^

Procedure Design Refresher Online Course

From : train | Type : Internal training | Mod

The Function of E-learning software: Quiz, certificate etc.



# Consulting and training Recommendation for training in 2022



- ✓ Practice has proved that the best way is to **break long-term training into multiple short-term training**, especially for the Pans-Ops PD Initial Course and PBN PD Course because of too much learning content and load for students.
- ✓ FPP would like to divide to three Modules. The **first module** is about the Foundation skills such as IAS-TAS, Turning area and SIDs. The **second module** is focus on the 2D approach such as NPA and RNP APCH. The **third module** is for ILS and Baro-VNAV.
- ✓ By combining the conventional and PBN courseware, FPP can achieve the purpose of compressing the lecture time but the trainee may have **more time in class for exercise** and **master the skill in shorter time**. The exercise time will be increase to more than **50%** of the training time.

Meeting/Training Organizing Plan						
Date	Activities	Location	Participants	Strategic Objectives	Organizer	
<b>Training:</b>						
1	14 - 25 Mar	Flight Procedure Design Course- <b>Module 1</b> (main topic: Foundation skills & SIDs)	Online /onsite	FPP/APAC States	Expand Value Creation	FPP
2	9 – 20 May	Flight Procedure Design Course- <b>Module 2</b> (main topic: 2D approach, NPA& RNP APCH)	Online /onsite	FPP/APAC States	Expand Value Creation	FPP
3	5 - 6 Jul	QA workshop (Whole process for IFP design and flight validation)	Online /onsite workshop	FPP/APAC States	Expand Value Creation	FPP
4	19-30 Sep	Flight Procedure Design Course- <b>Module 3</b> (main topic: 3D approach, ILS & Baro-VNAV)	Online/onsite	FPP/APAC States	Expand Value Creation	FPP
5	7-11 Nov	RNP AR refresher course	Online /onsite	FPP/APAC States	Expand Value Creation	FPP
<b>Meeting:</b>						
6	TBD	FPP SCM/14	Fourth quarter	FPP SCM	Expand Value Creation	FPP

## Current situation:

Roy has already finished the secondment for APAC FPP since the end of Sep this year.

LIU Lujiang will be extended his current appointment for an additional period of two year from December 2021 to December 2023.

2 flight procedure designers , 1 IT specialist and 1 admin staff through secondment from China at present time.

## Potential requirements :

- a) **Short-term.** Secondment Under the ICAO Policy.
- b) **Long-term.** After Phase 4, Global recruitment through ICAO TCB contracts seems more logical than secondment through ICAO SEA because FPP is a ICAO TCB programme rather than an ICAO agency. **So the Global recruitment for a flight procedure instructor and an admin staff may be the basic requirements** and feasible solution next phase. But the budget for the payment is a problem.