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# Simulator System design

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# cost considerations

- budget
- performance
- equipment
- room

# significant cost factors

- visualization system
- number of 3D aerodrome models
- number of 3D aircraft models
- consoles equipment
- training

# visualization system

3-4 large LCDs
depends on the size

8-12 large LCDs
depends on the size

projection system with high resolution DLP projectors
(typically 6), flat or circular projection screen

projection system with high resolution laser projectors

# aerodrome 3D models

custom geospecific aerodromes

- 3 runways
- 2 runways
- 1 runway

modified “similar” aerodromes

seahorse aerodrome

# number of 3D aerodrome models

basic package
30 aircraft / livery 3D models
5 ground vehicles 3D models

big package
100 aircraft / livery 3D models
5 ground vehicles 3D models

# number of 3D aircraft models

basic package
30 aircraft models
5 vehicles

large package
100 aircraft models
10 vehicles


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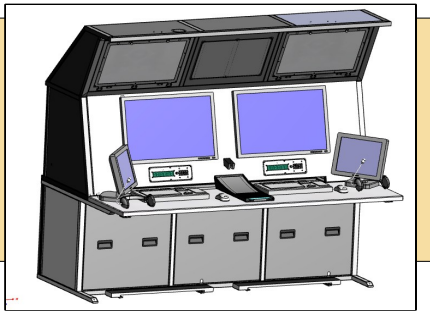
# consoles

plain tables

flat consoles, low consoles

medium consoles
typically with very large displays


high ATC fully equipped APP - ACC consoles



# equipment

office computer equipment
short service life

high quality computer equipment

high quality ATC computer equipment

Note: ATC determined equipment is 2x to 20x more expensive than high quality computer equipment.

# training

factory training
2 weeks instructors
1 week technicians

on-site training absolute minimum, requires self-education
3 days instructors
1 week technicians

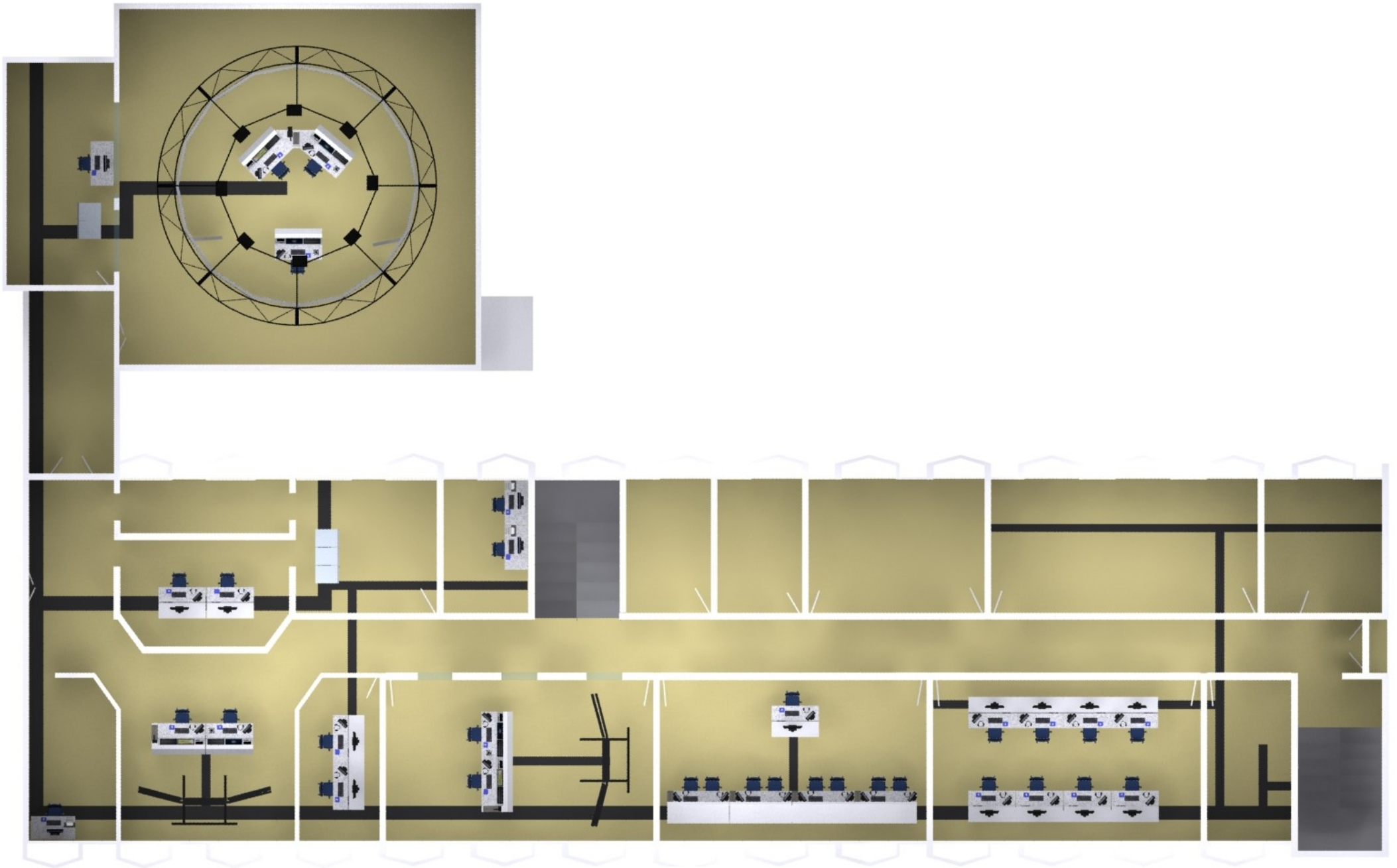
good on-site training, requires some self-education
2 weeks instructors
1 week technicians

advanced on-site training, recommended after 6 months practise
2 weeks instructors

# ROOM AVAILABLE

# LARGE SETUP

- 1x 360° circular projection system TWR
- 2x 3/channel large LCDs
- 4x APP-ACC sectors
- 4x procedural
- 14 pseudopilots
- 2x exercise workstations
- 2x technical room



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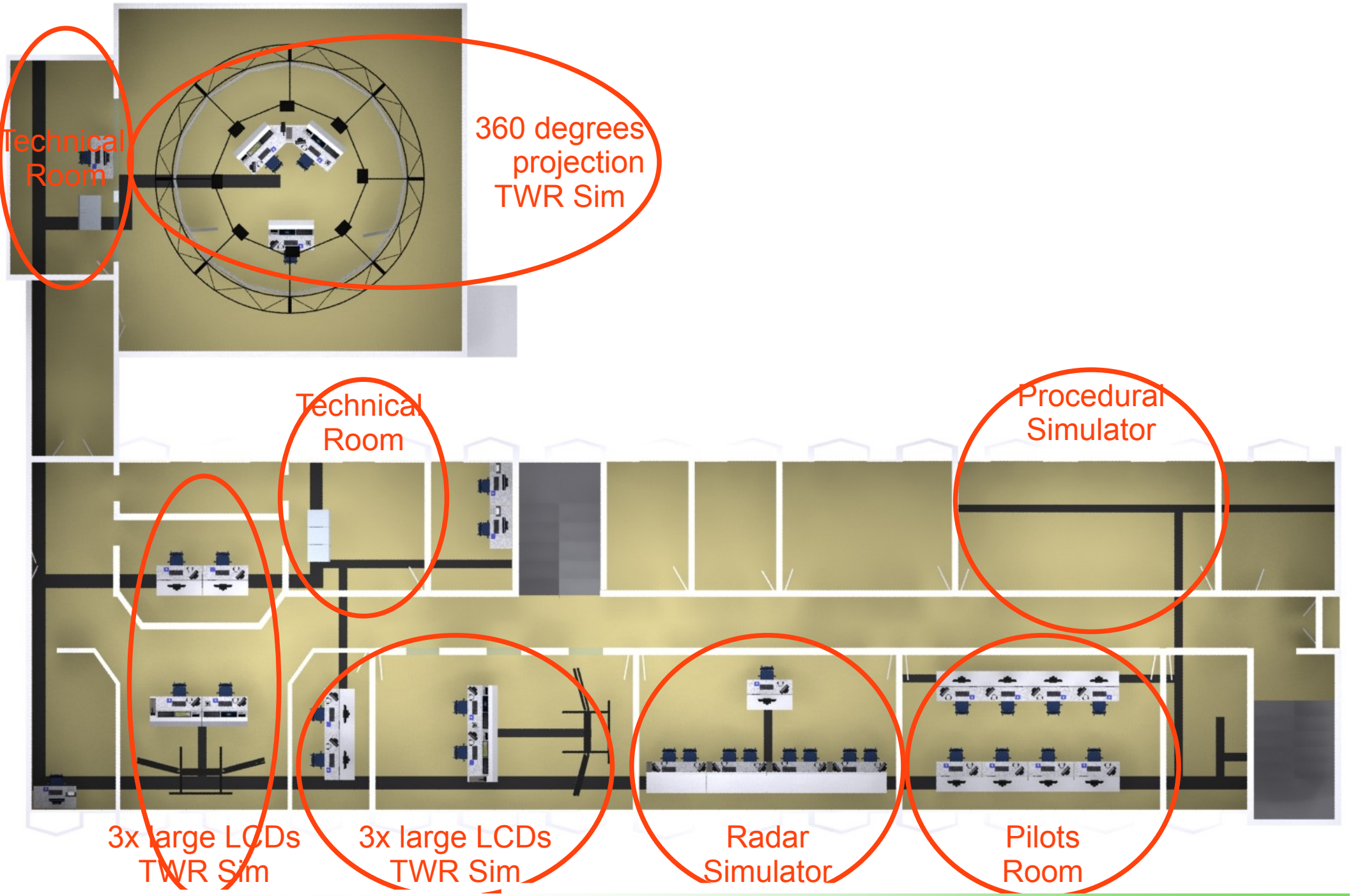


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Radar Sim

Tower Sim

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360 degrees projection TWR Sim dome

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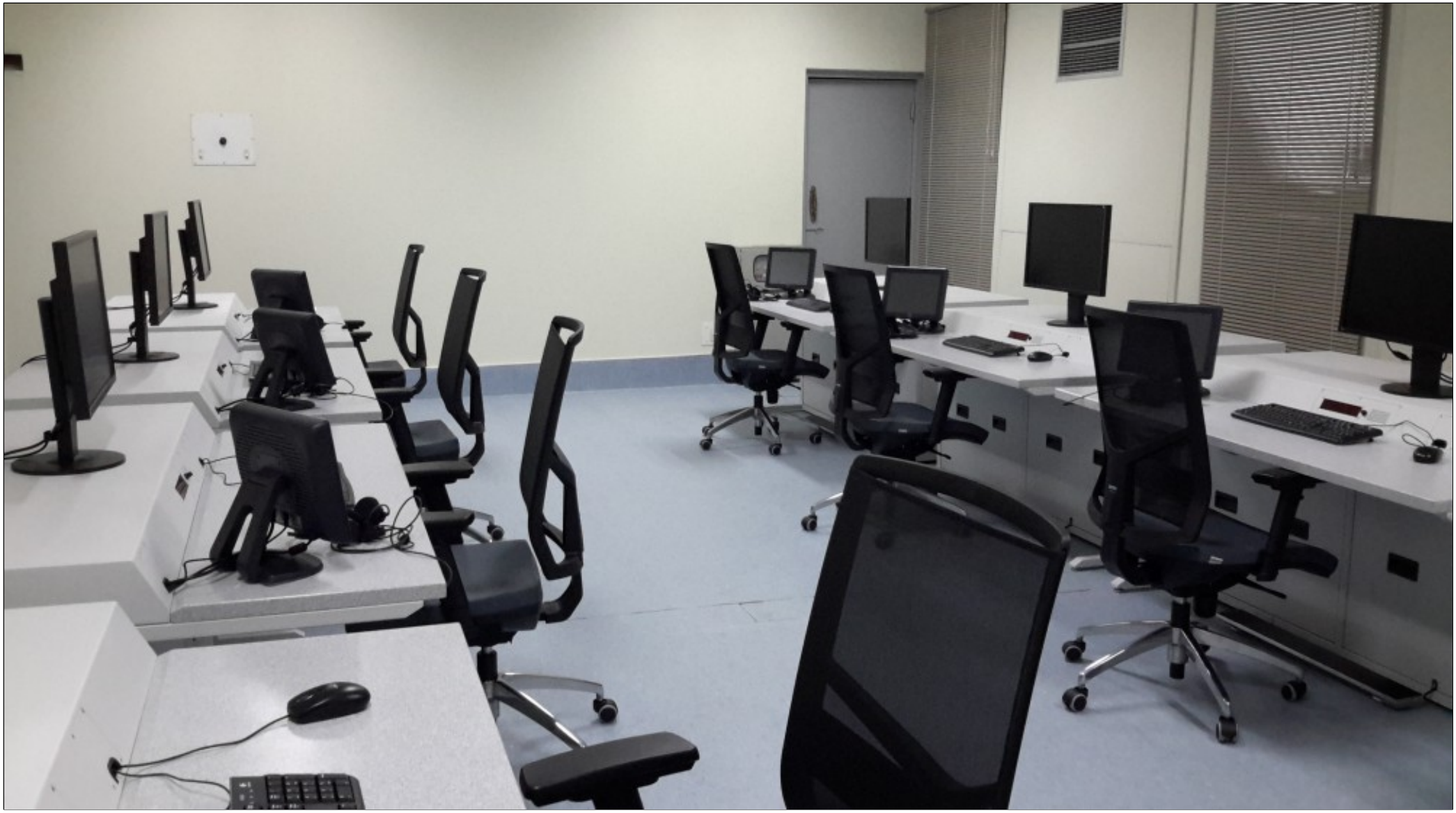
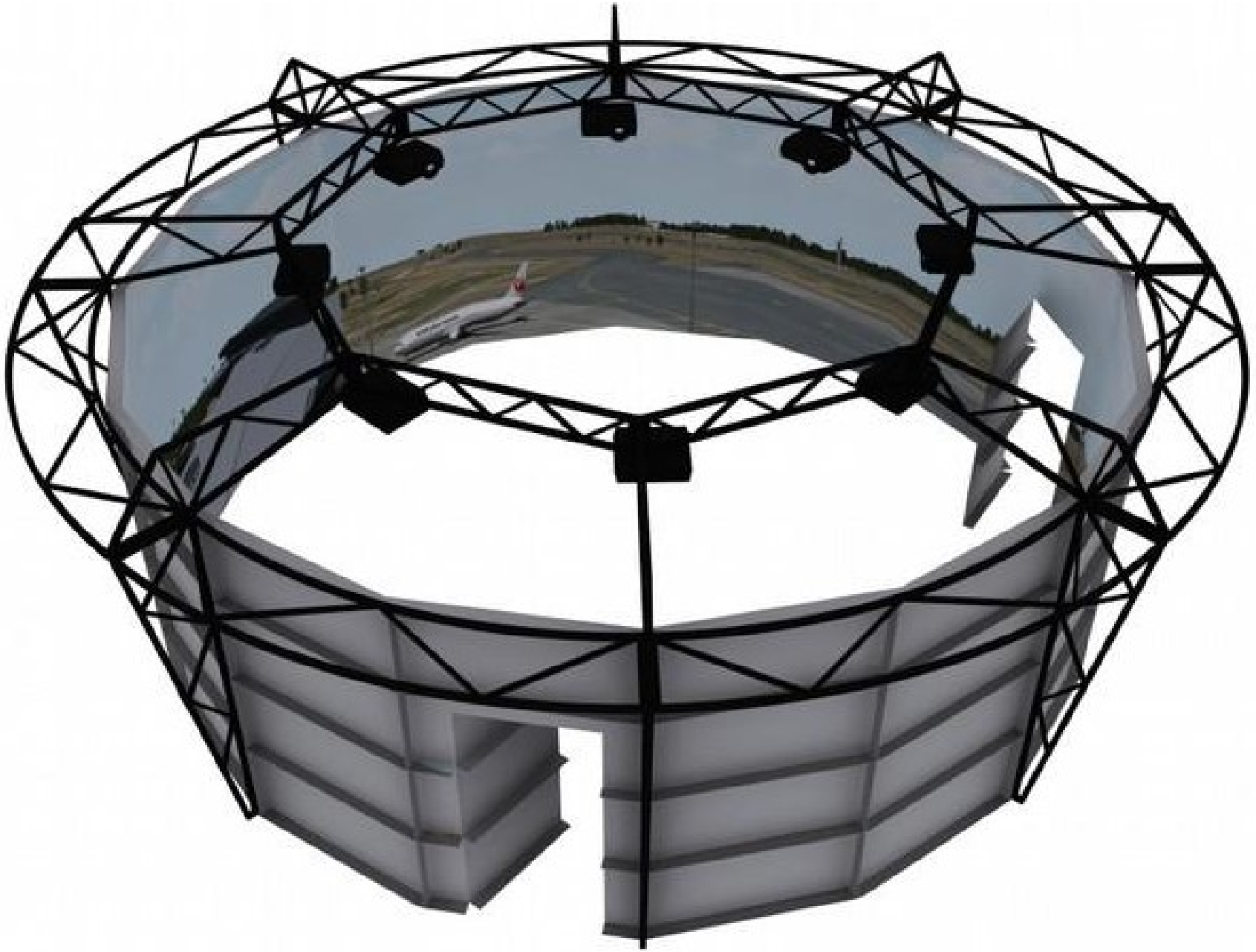


Pilots Room

Technical Room



360 degrees projection TWR Sim dome

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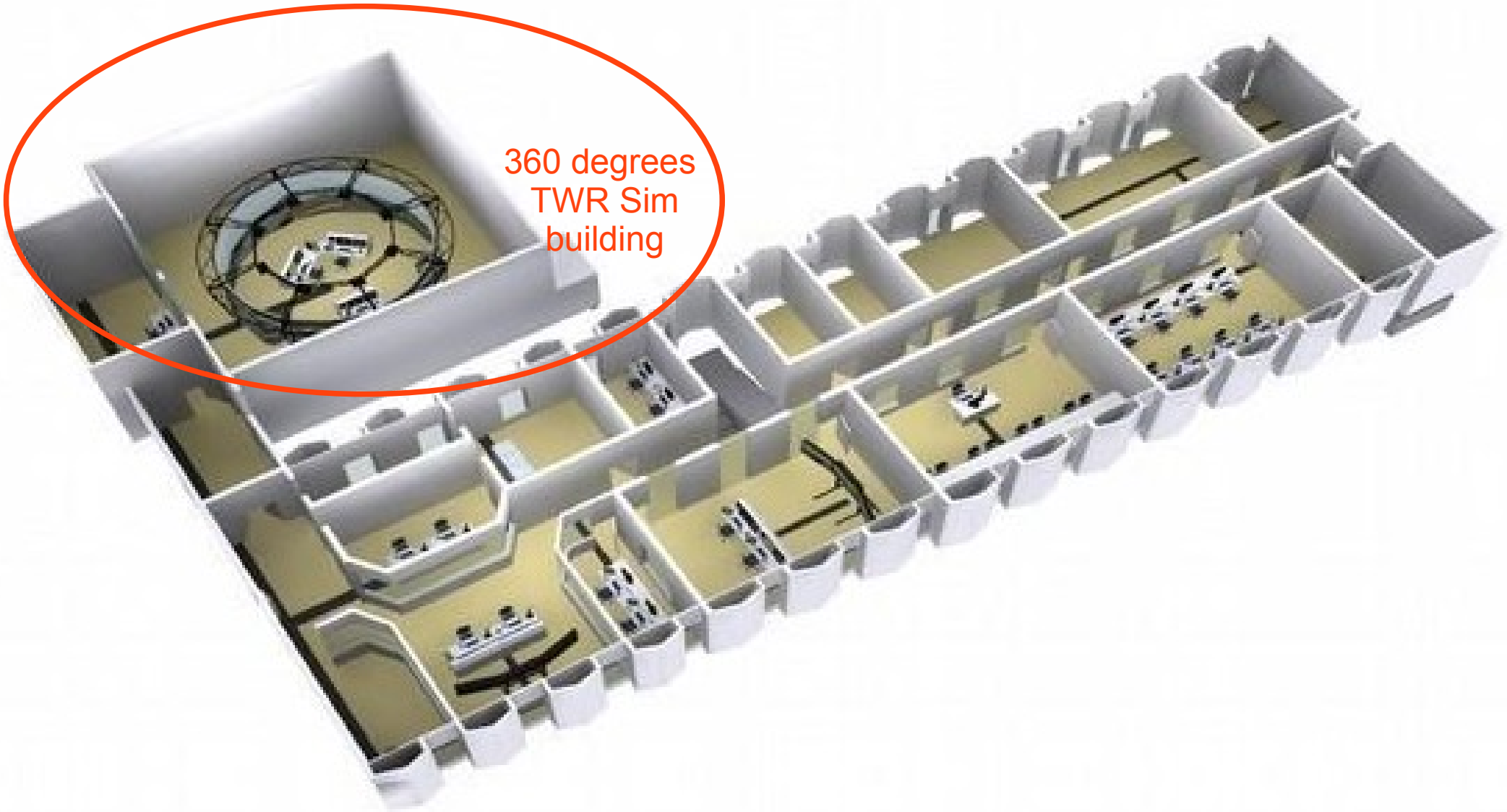
360 degrees projection TWR Sim dome

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360 degrees projection TWR Sim building

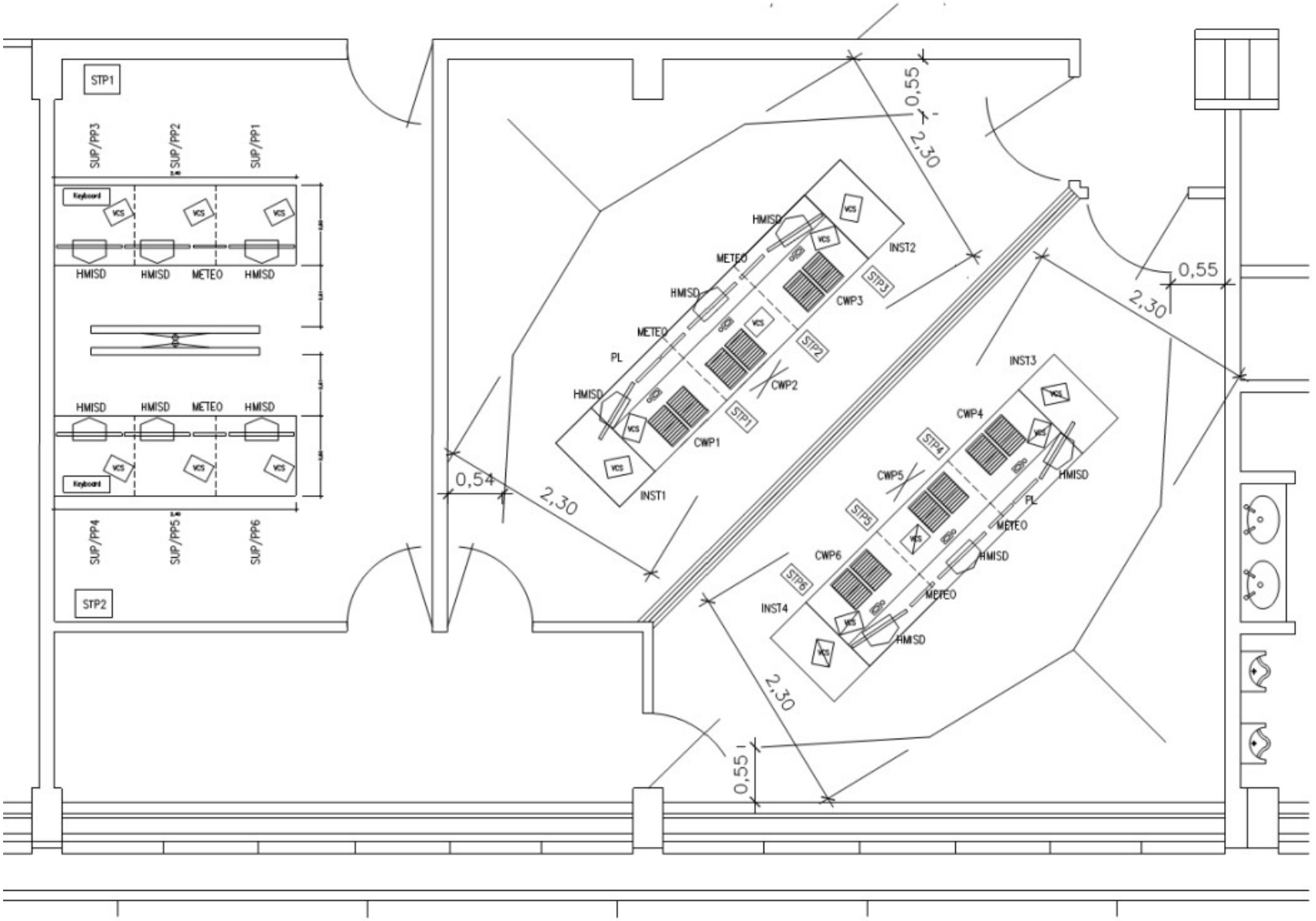
360 degrees projection TWR Sim building

# SMALL SETUP

- 2x 4-channel large LCDs TWR

INSTR – CLD – GROUND – AERODROME / APP - INSTR

- 6 pseudopilots
- 5x exercise workstations
- 1x technical room




layout of very compact solution 2x TWR Sim

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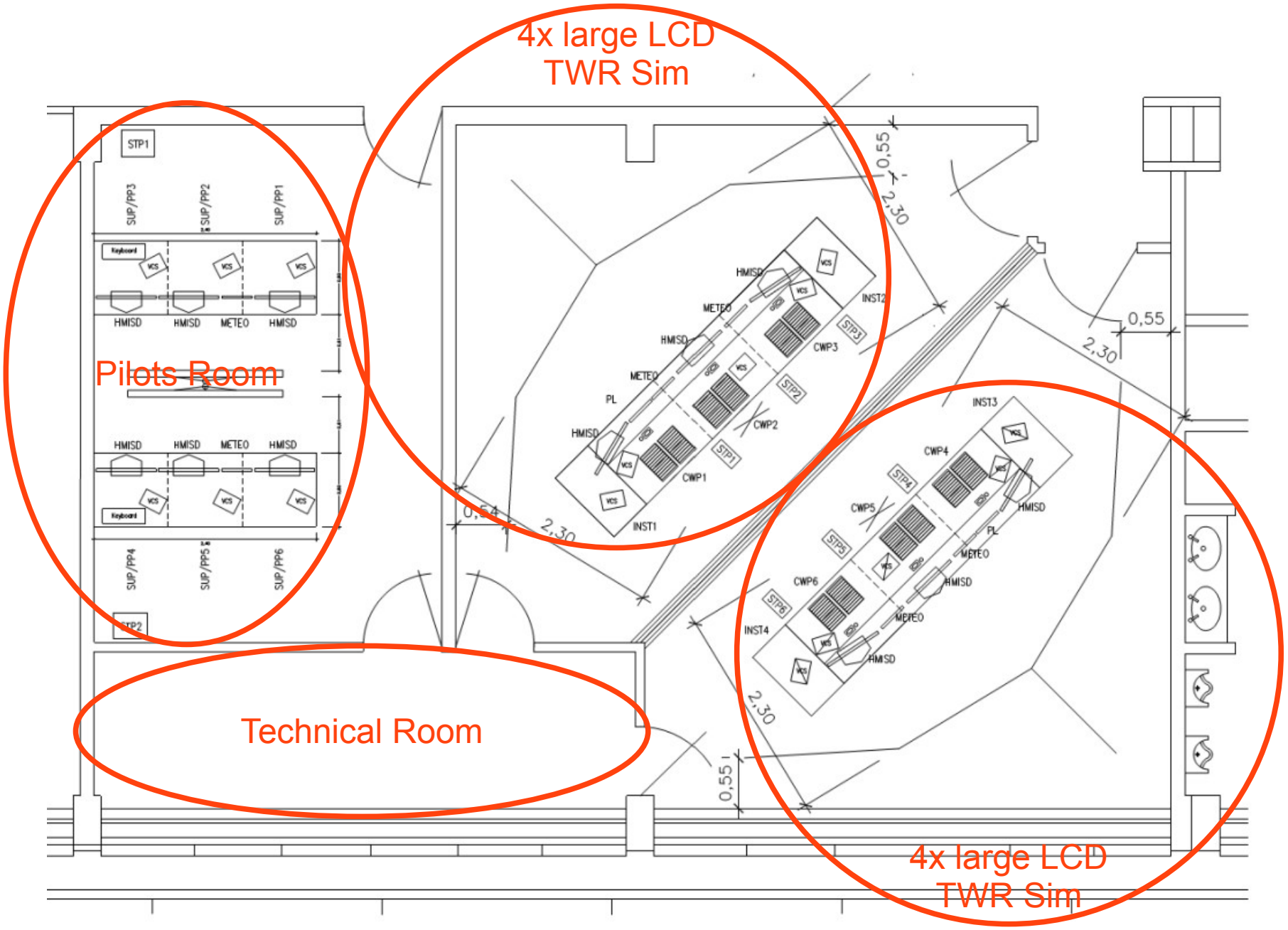


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example of aerodrome view on large displays

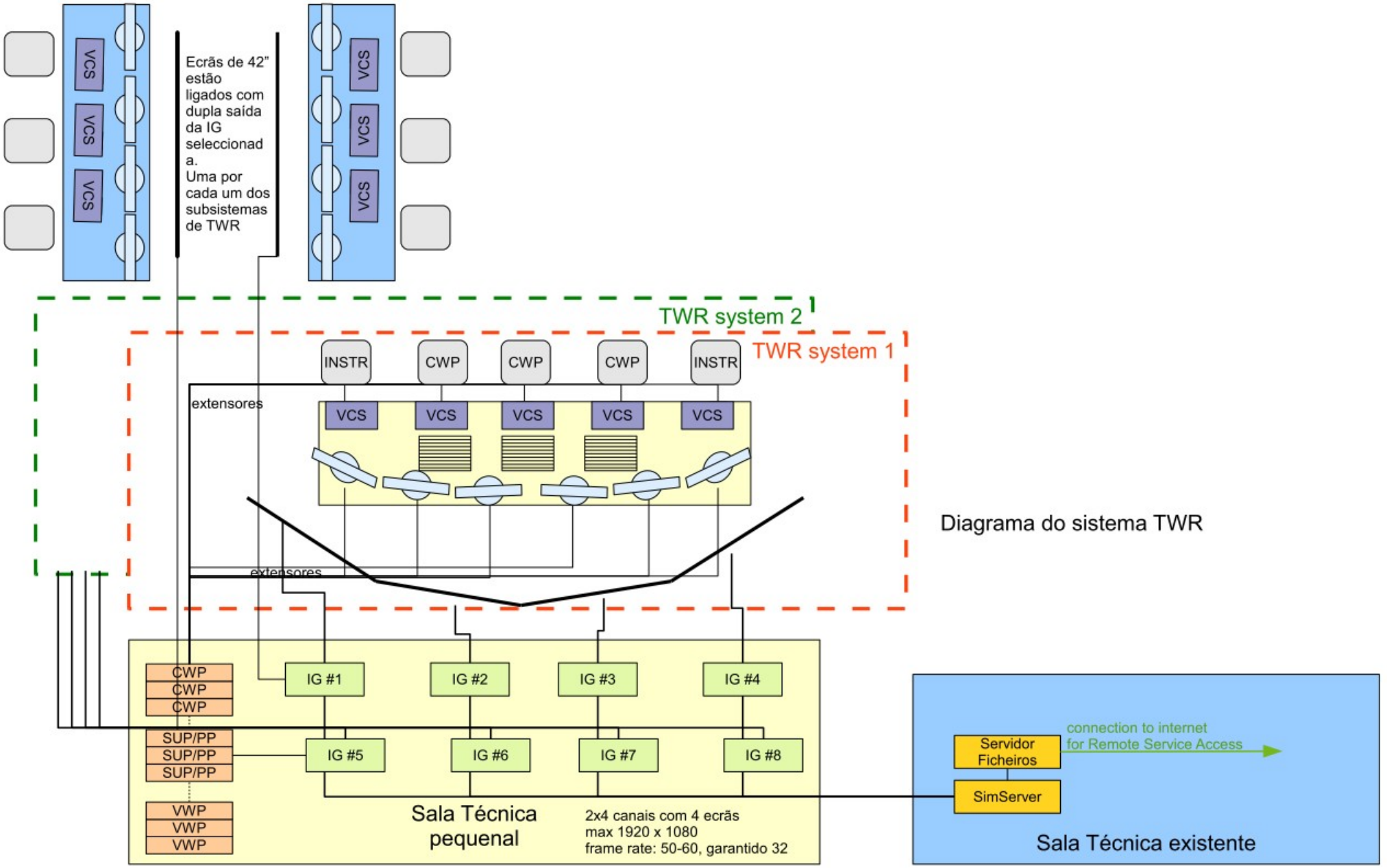


Diagrama do sistema TWR

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4x large LCDs 75”

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4x large LCDs 75”

Pilots Room

Pilots Room

TWR Controllers Room - 4x large LCDs 75”, 200 degrees view

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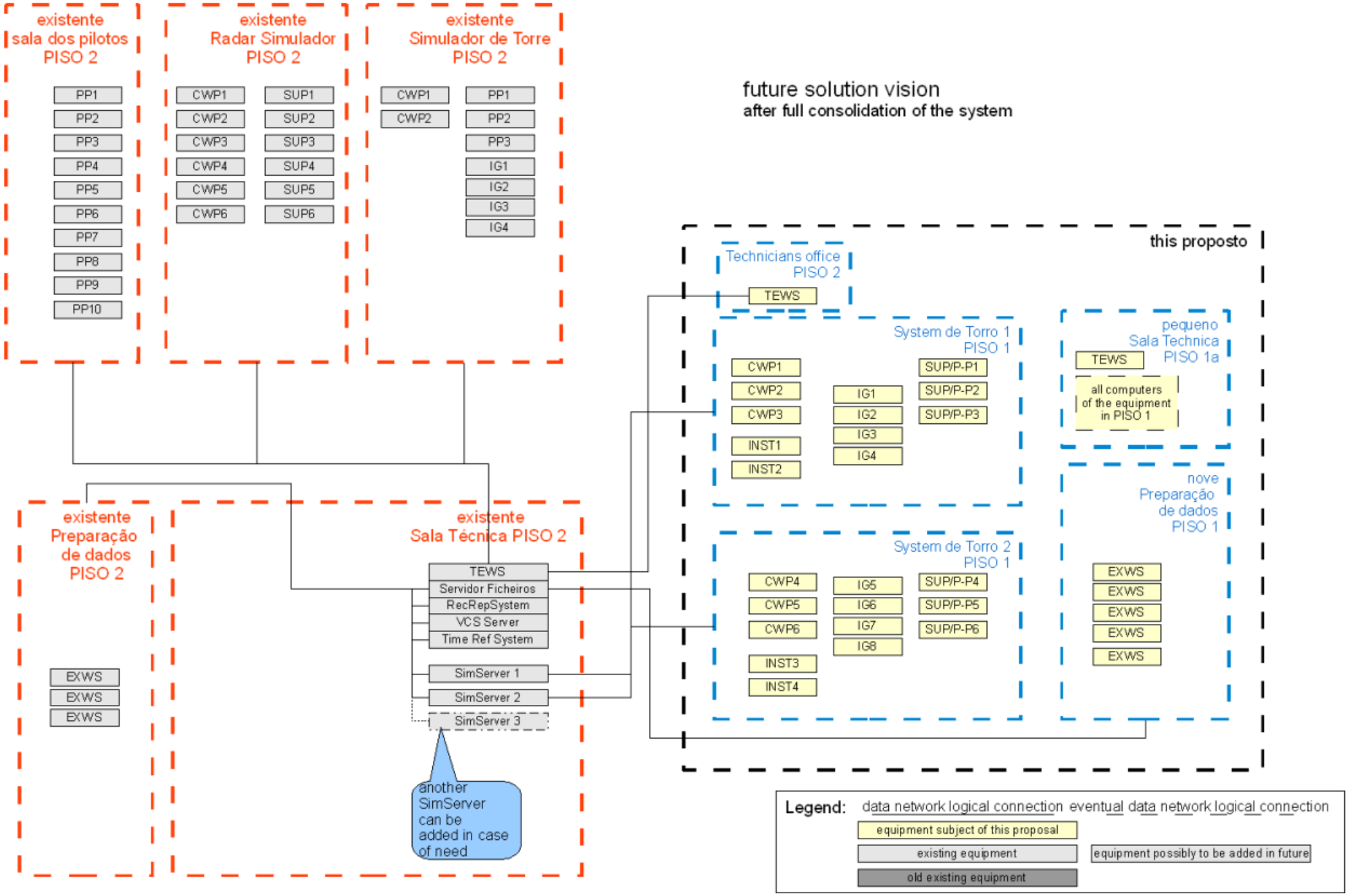
Technical Room

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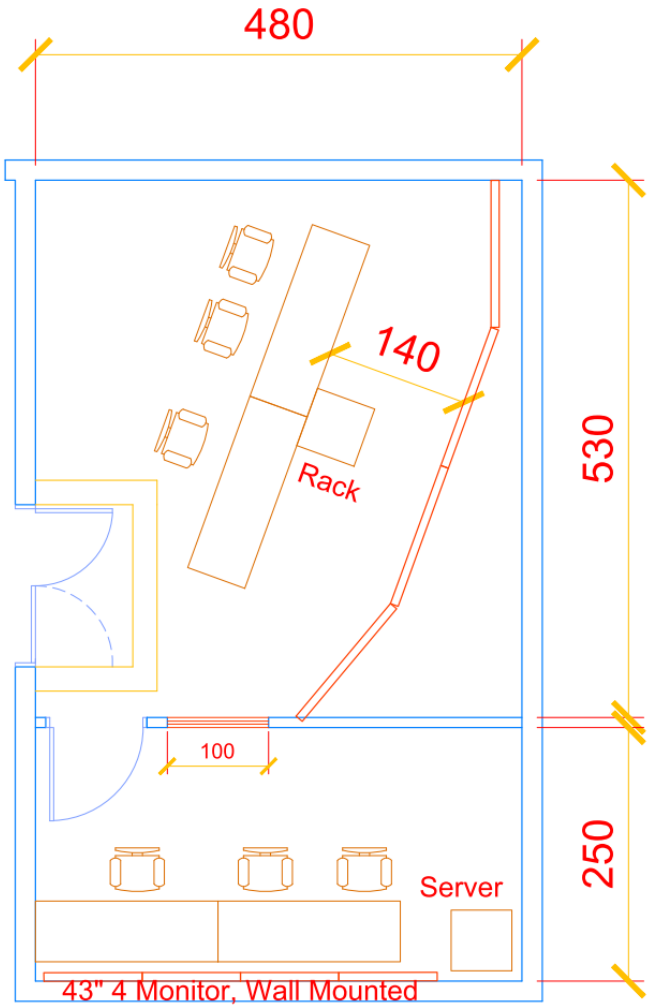
# SMALL SETUP

- 1x 4-channel large LCDs TWR

INSTR – GROUND – AERODROME / APP

- 2 pseudopilots
- 1x exercise workstations
- 1x technical room




OPTION 7

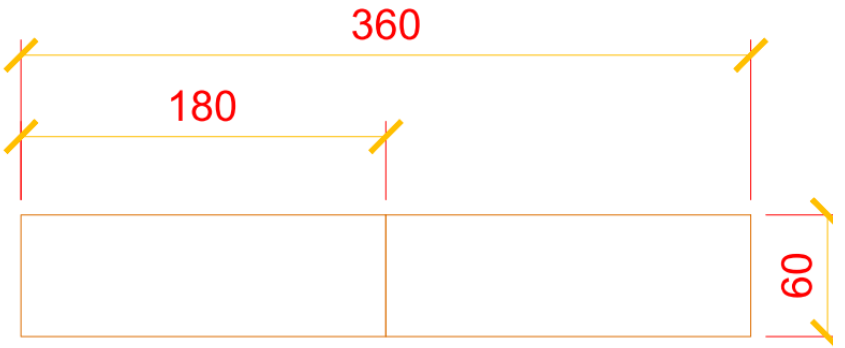
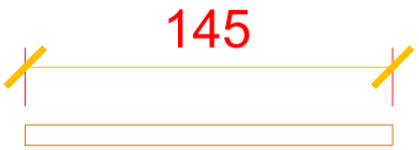



TABLE DETAILS

65" TV Approximate Dimension





TV Layout

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# MIDDLE SETUP

- 1x 9-channel large LCDs TWR

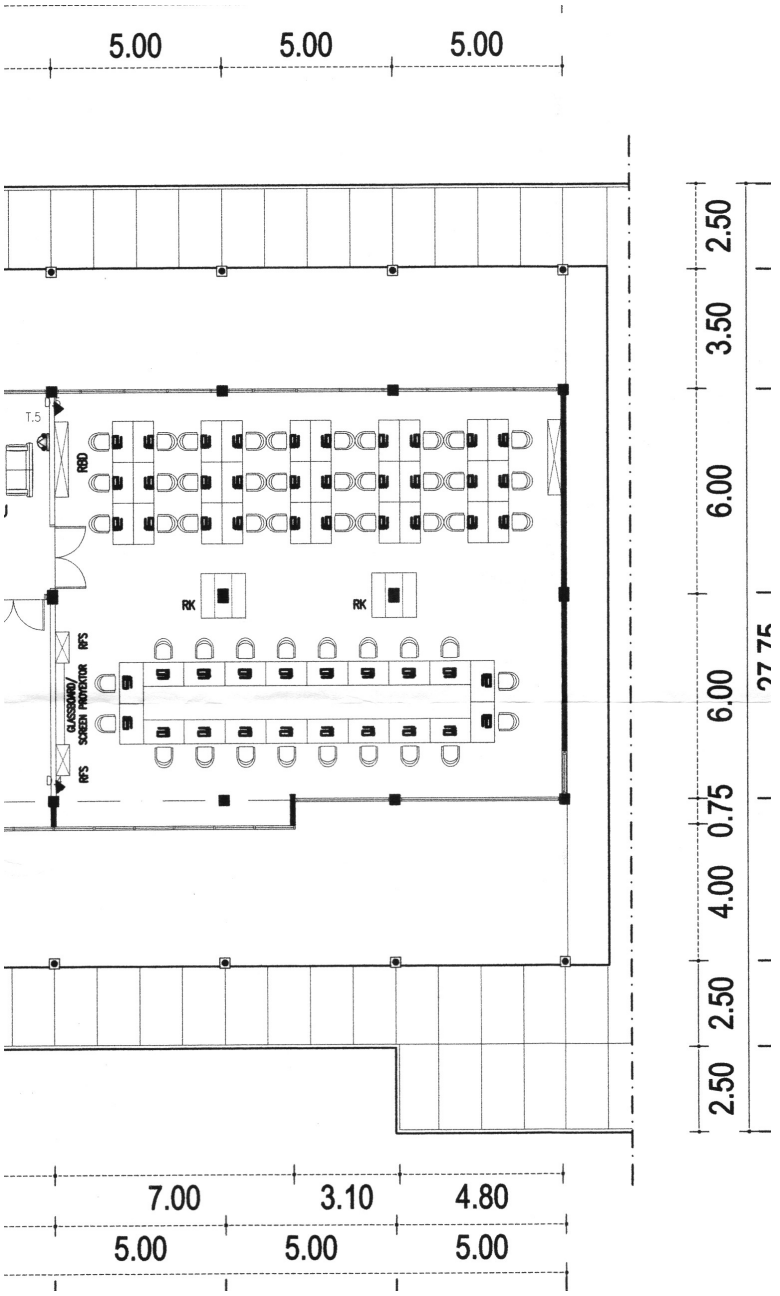
CLD – GROUND – AERODROME / APP

- 2x ACC-APP

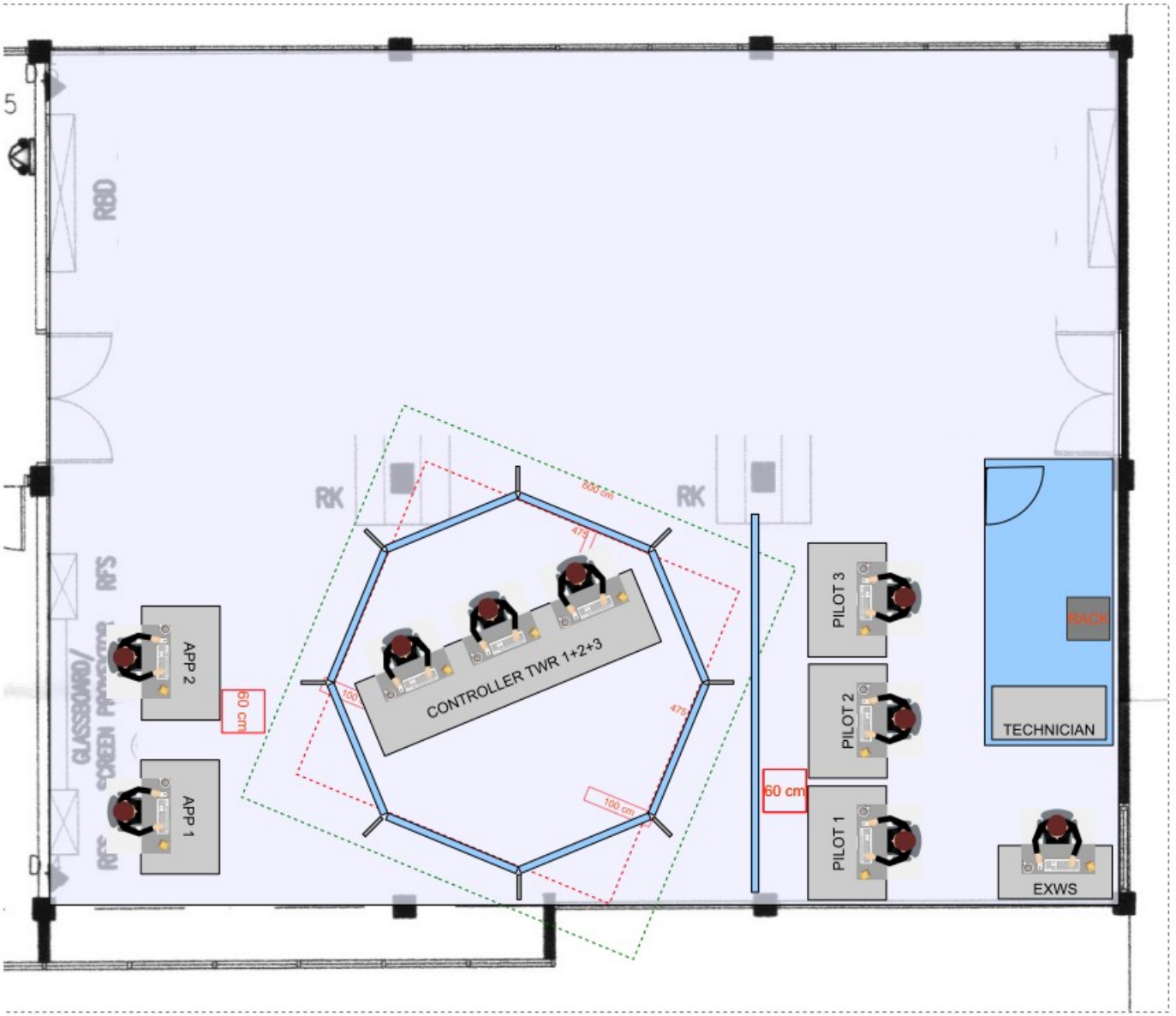
RADAR – ASSISTANT / PROCEDURAL

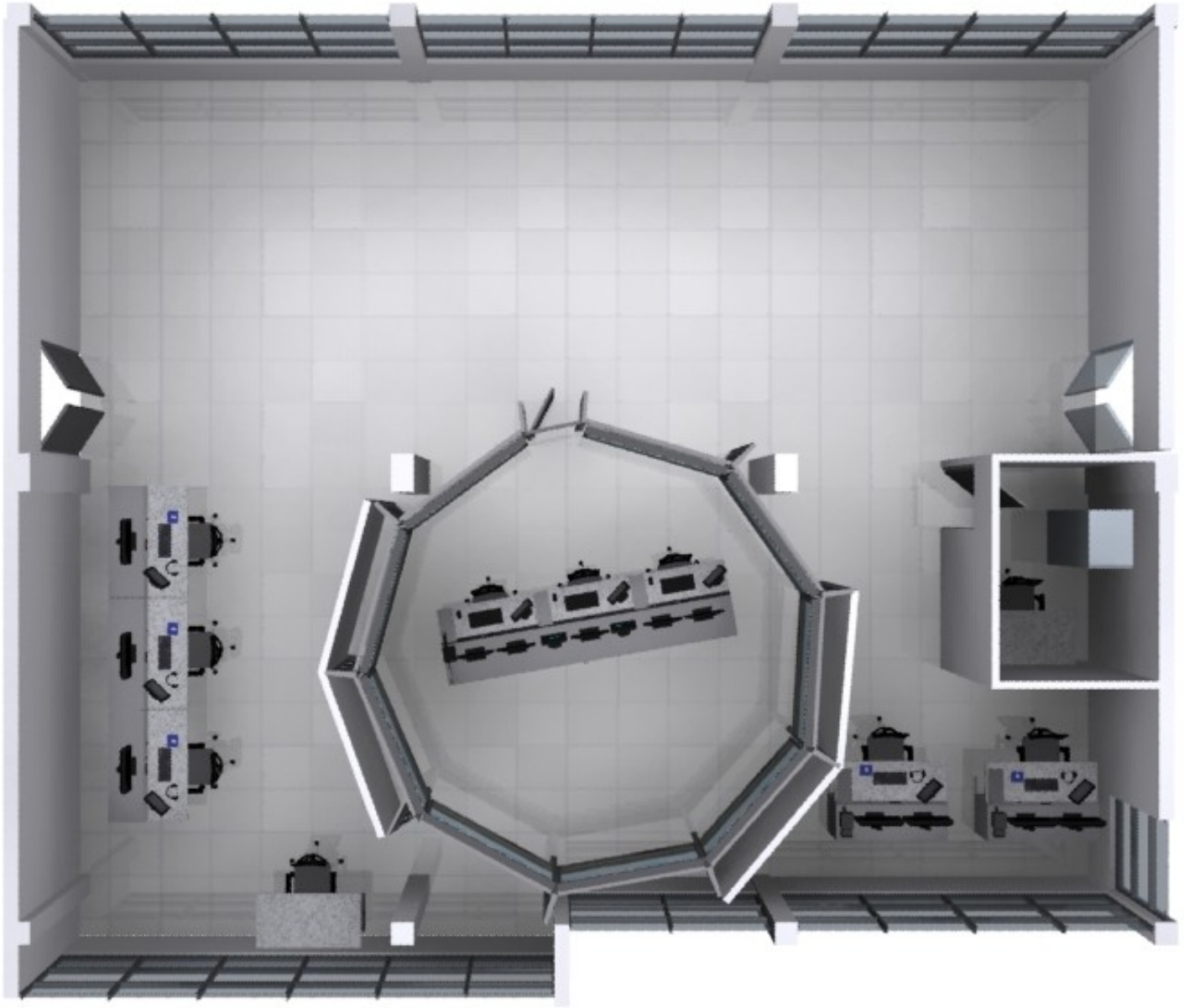
- 3 pseudopilots
- 1x exercise workstation
- 1x technical room

original room



Sim room setup





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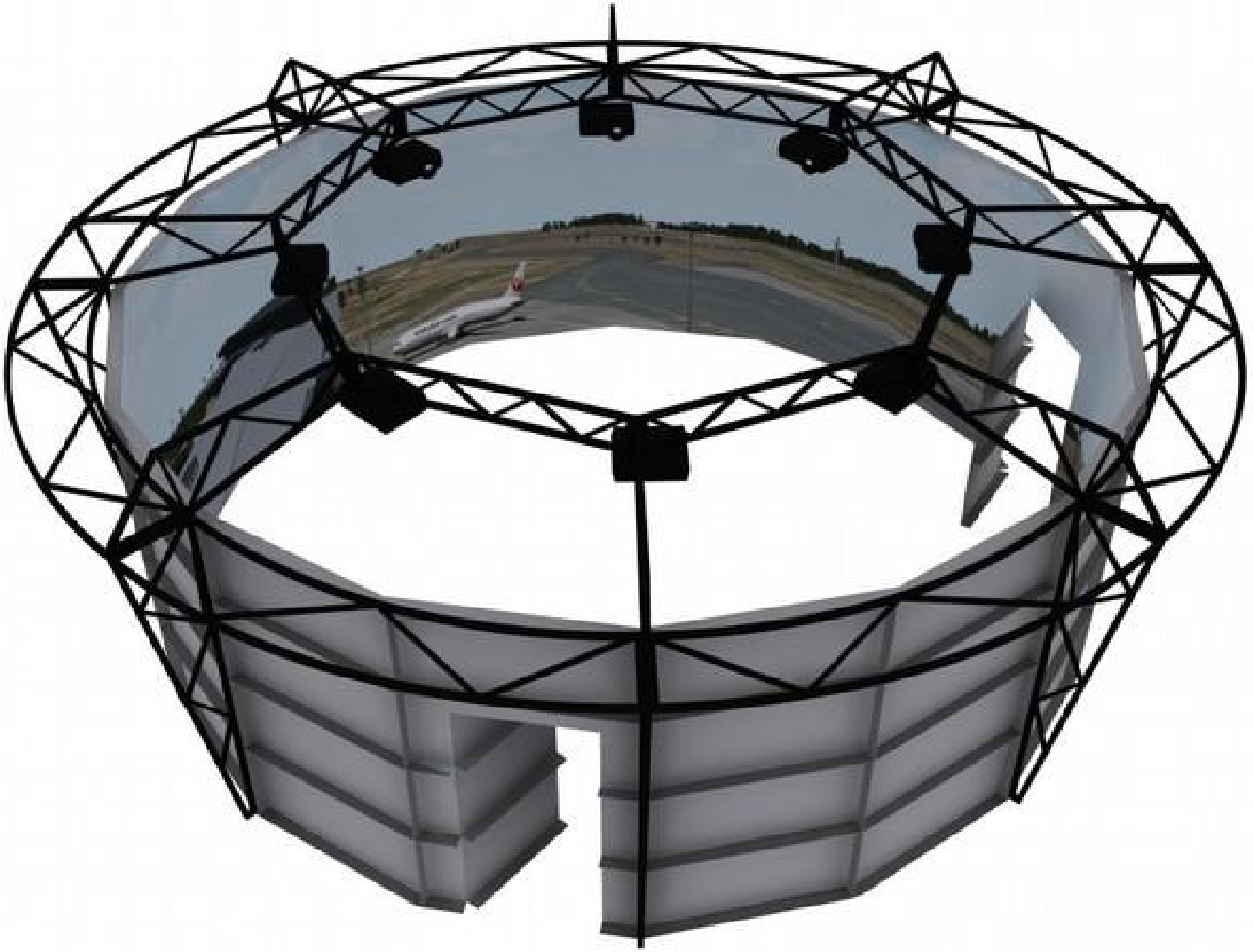
# PROJECTION SYSTEM



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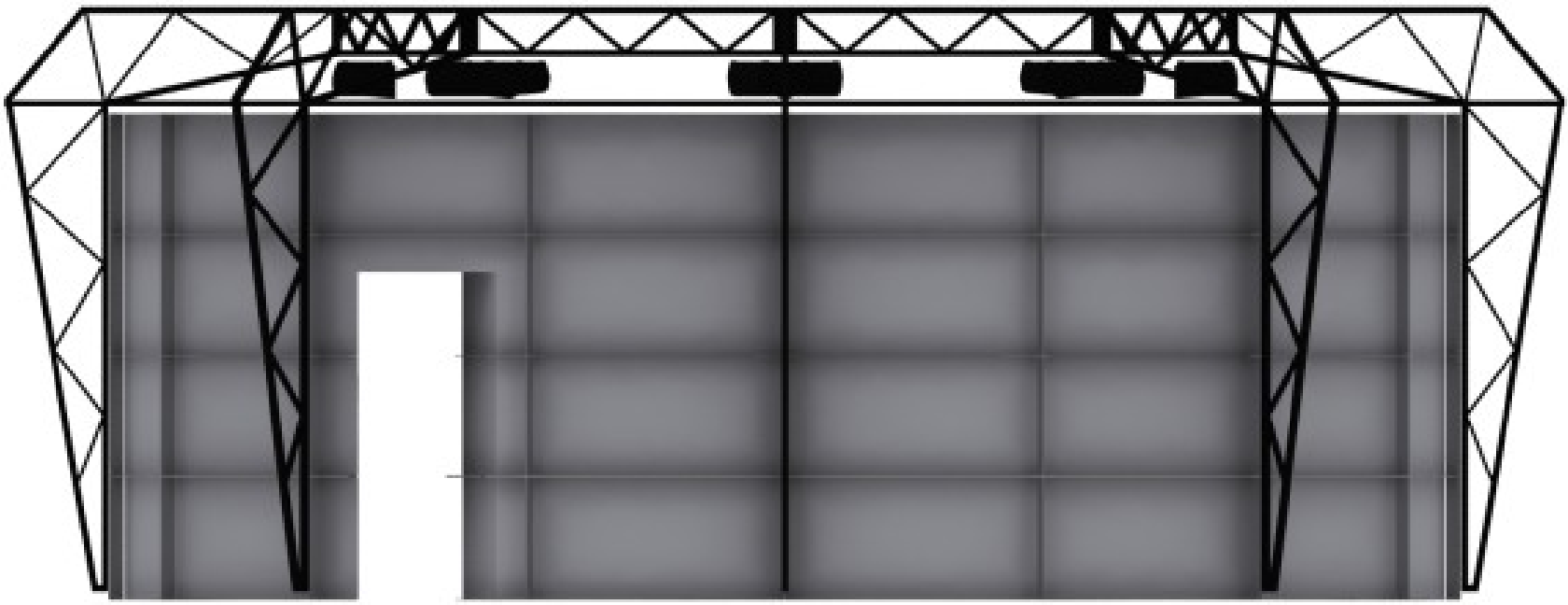

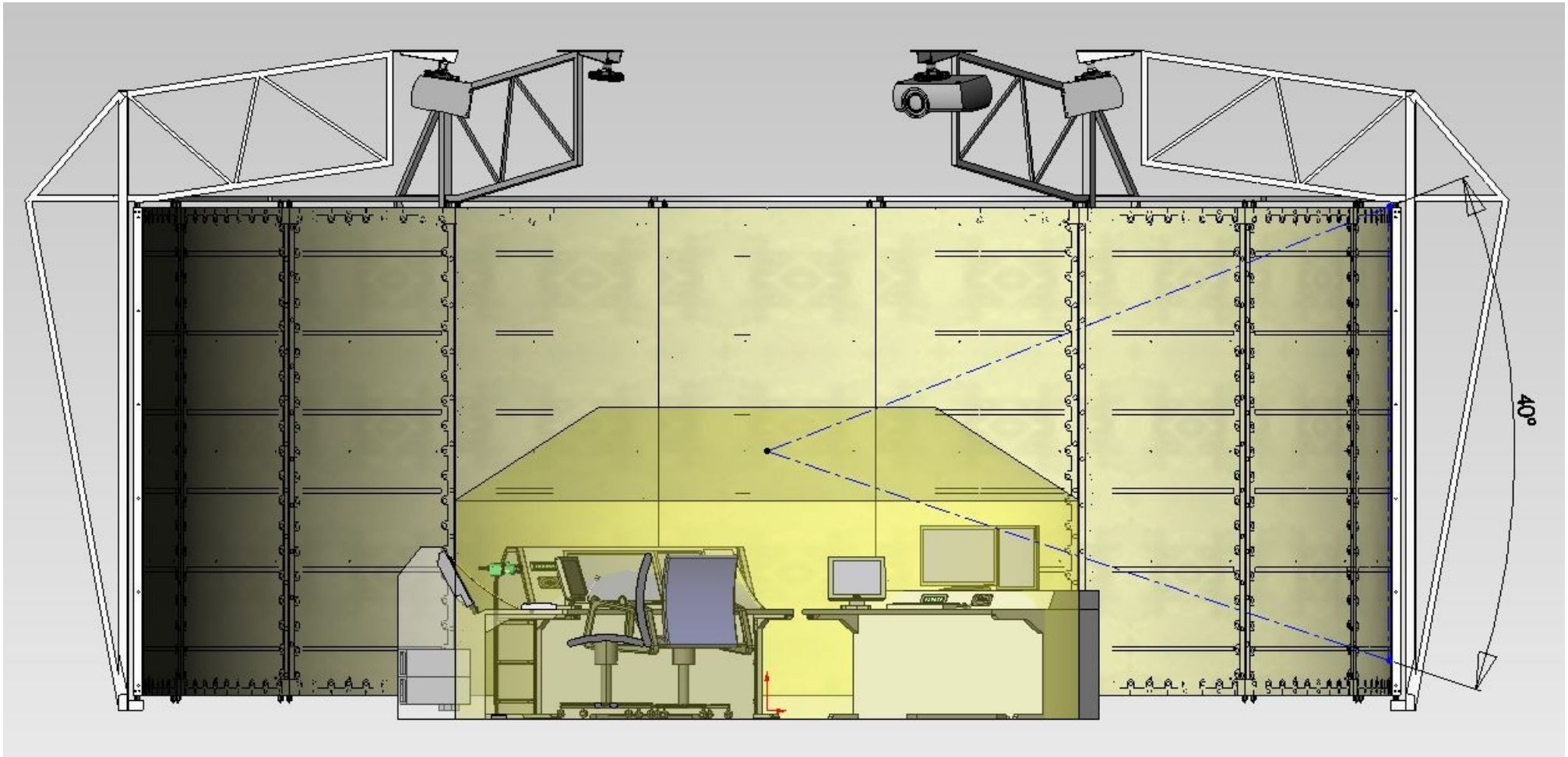

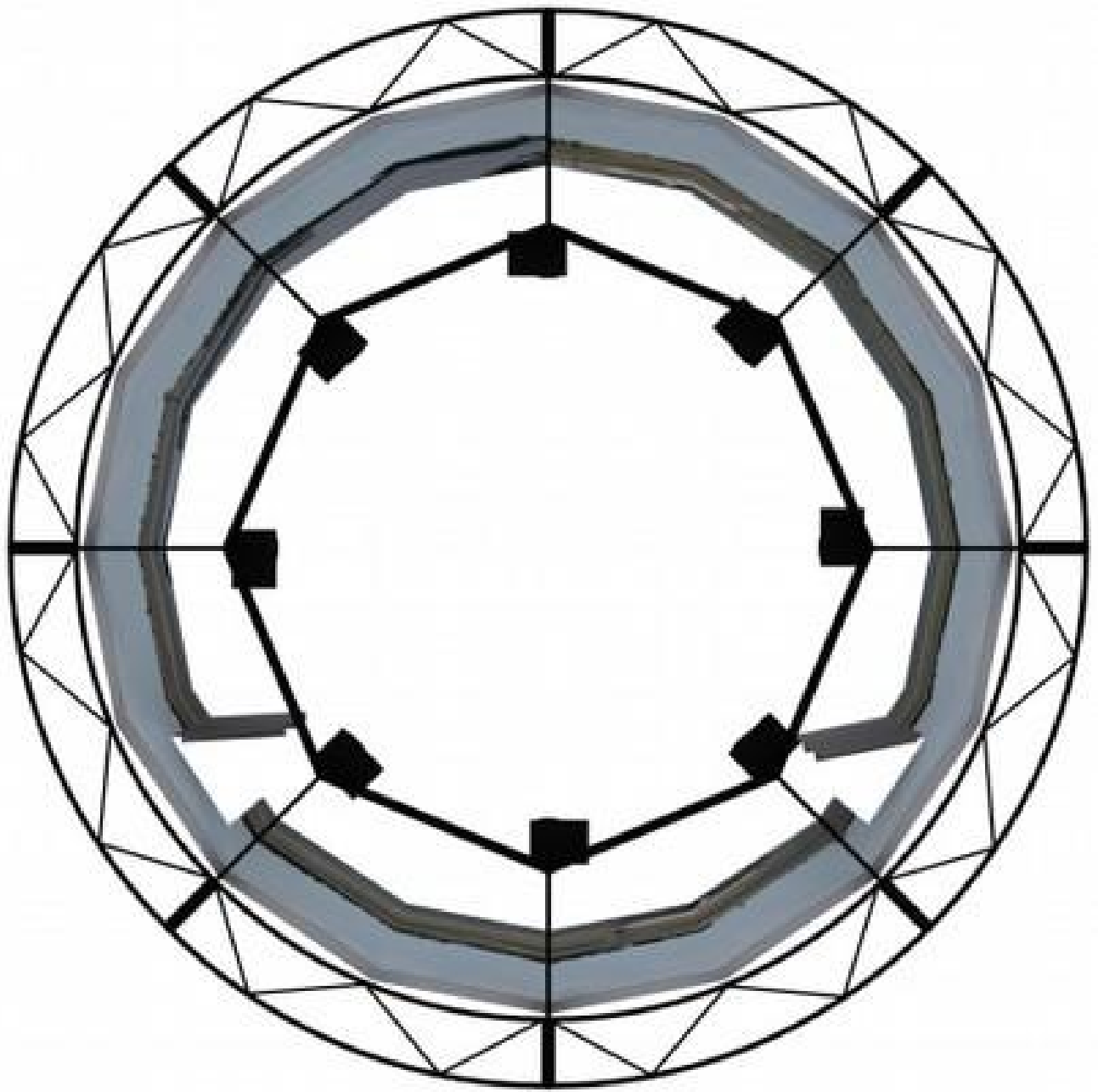

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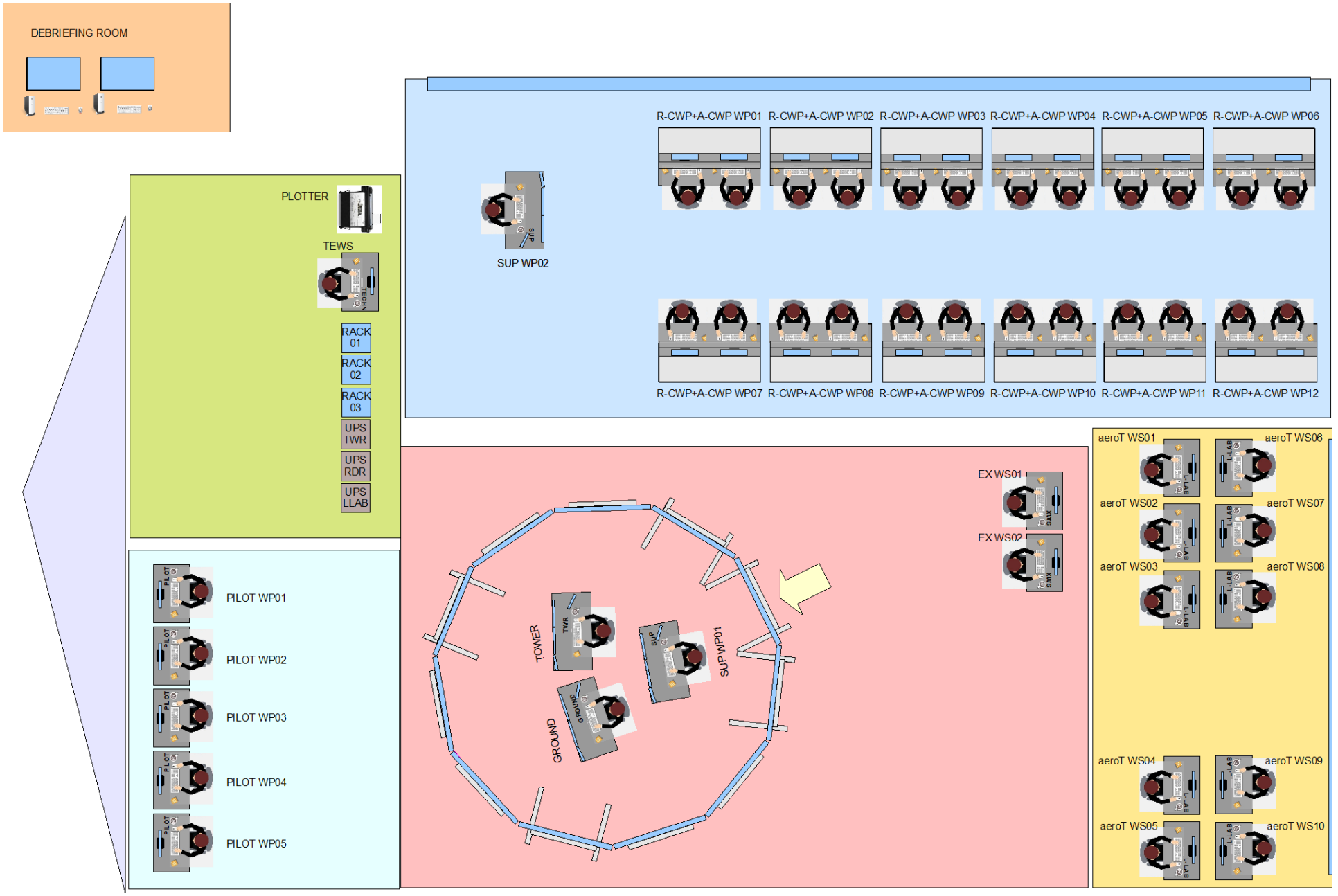
BARCO F35

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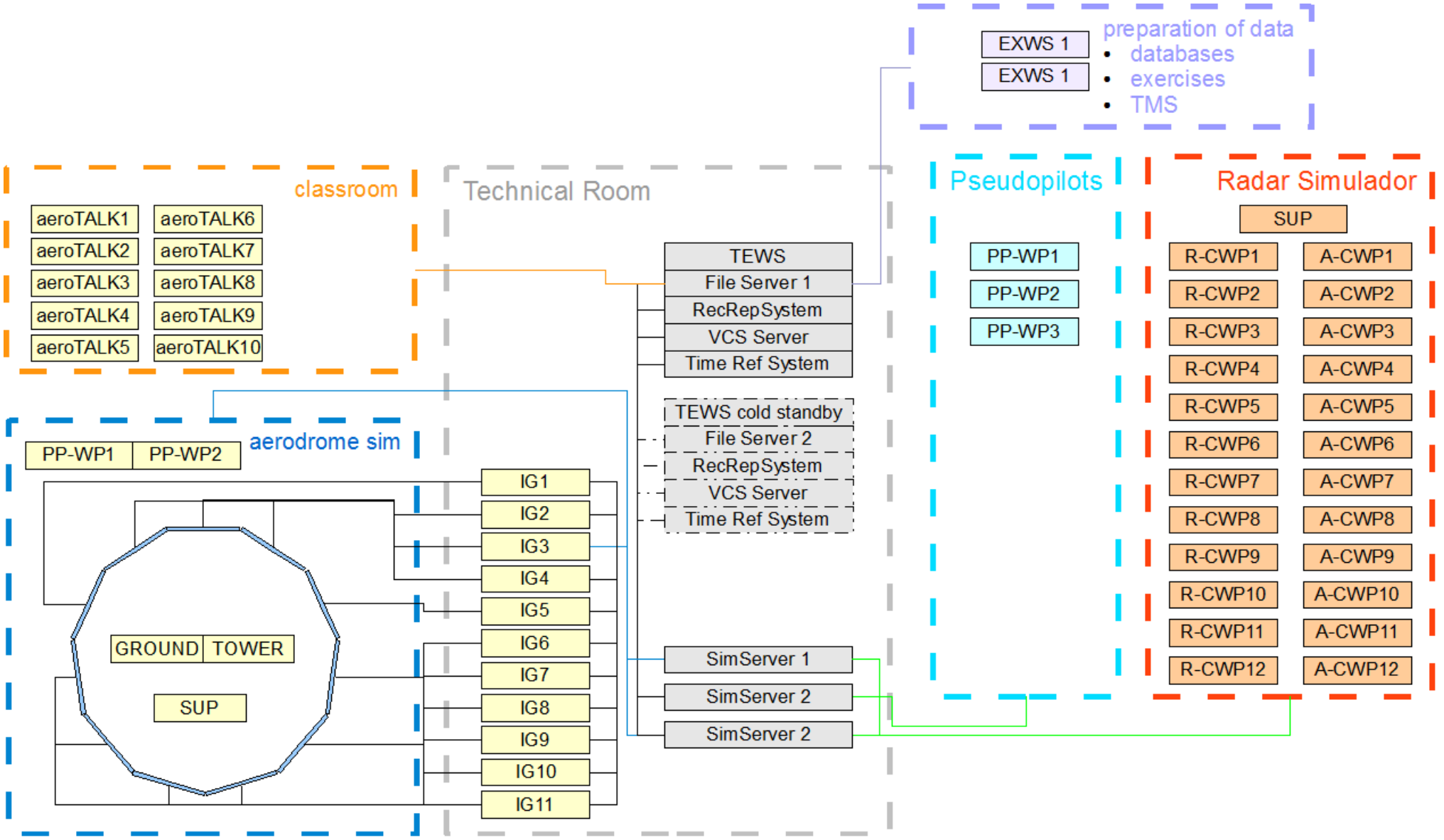


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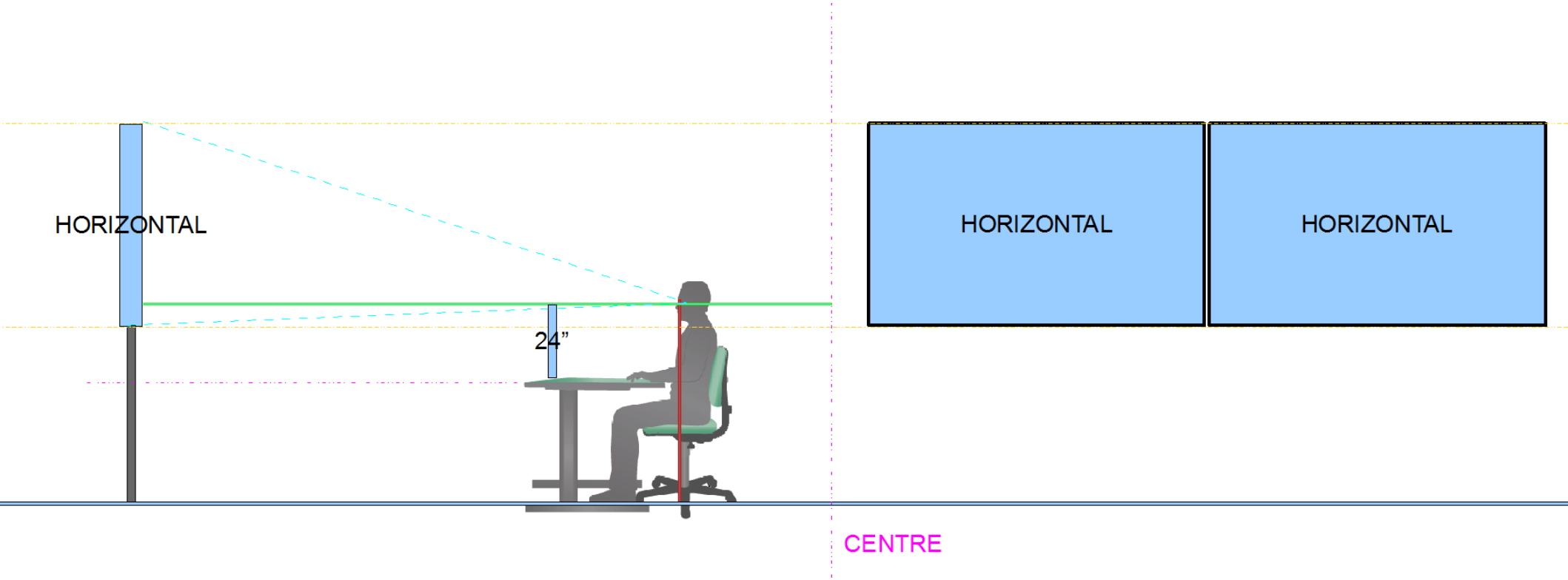
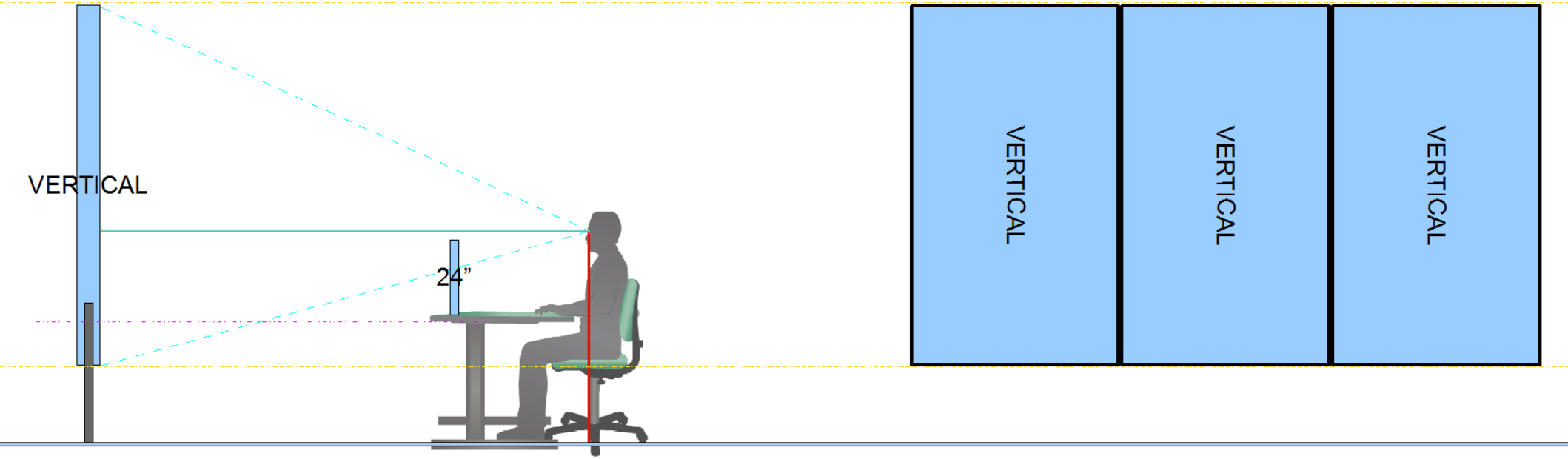
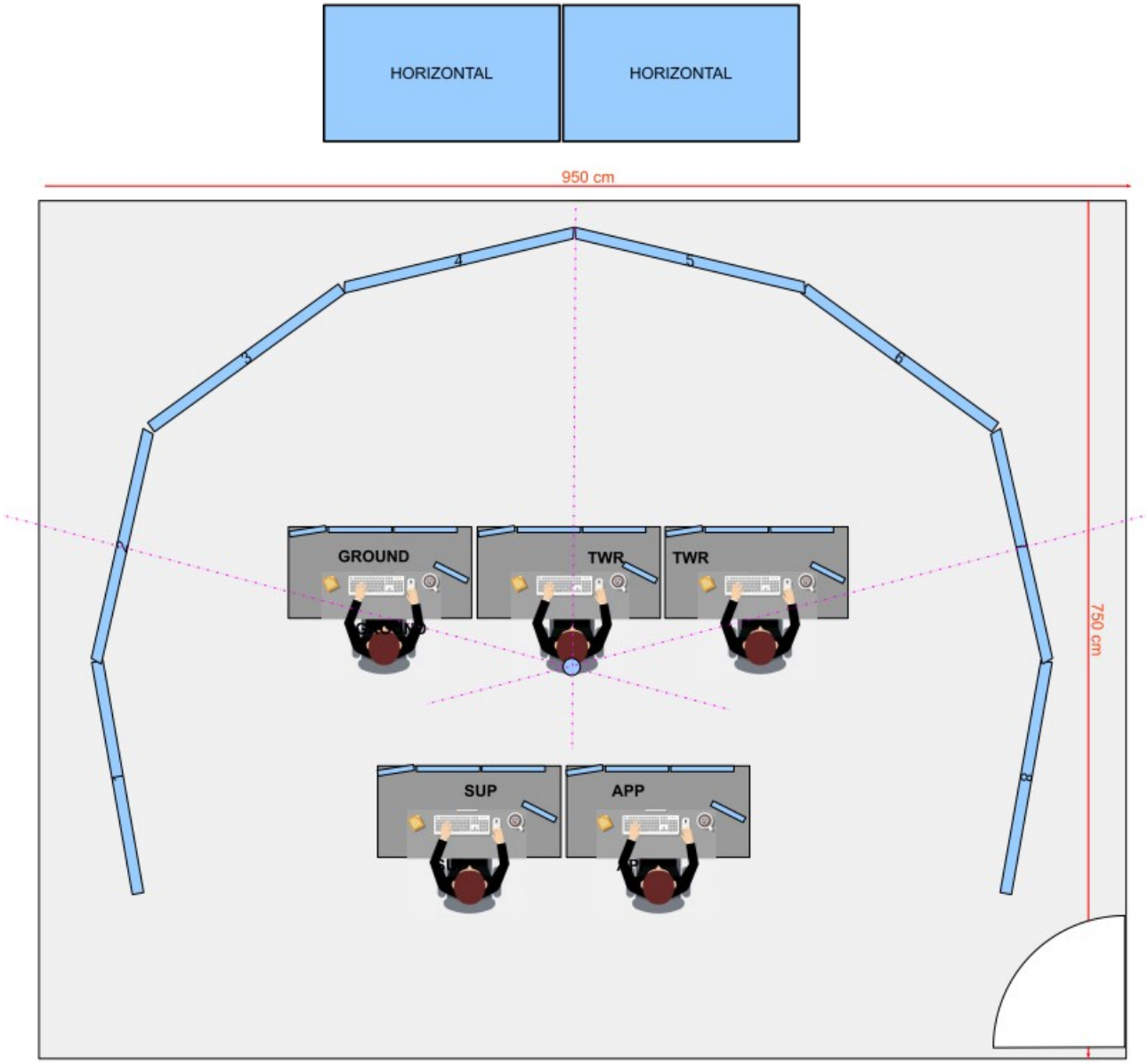


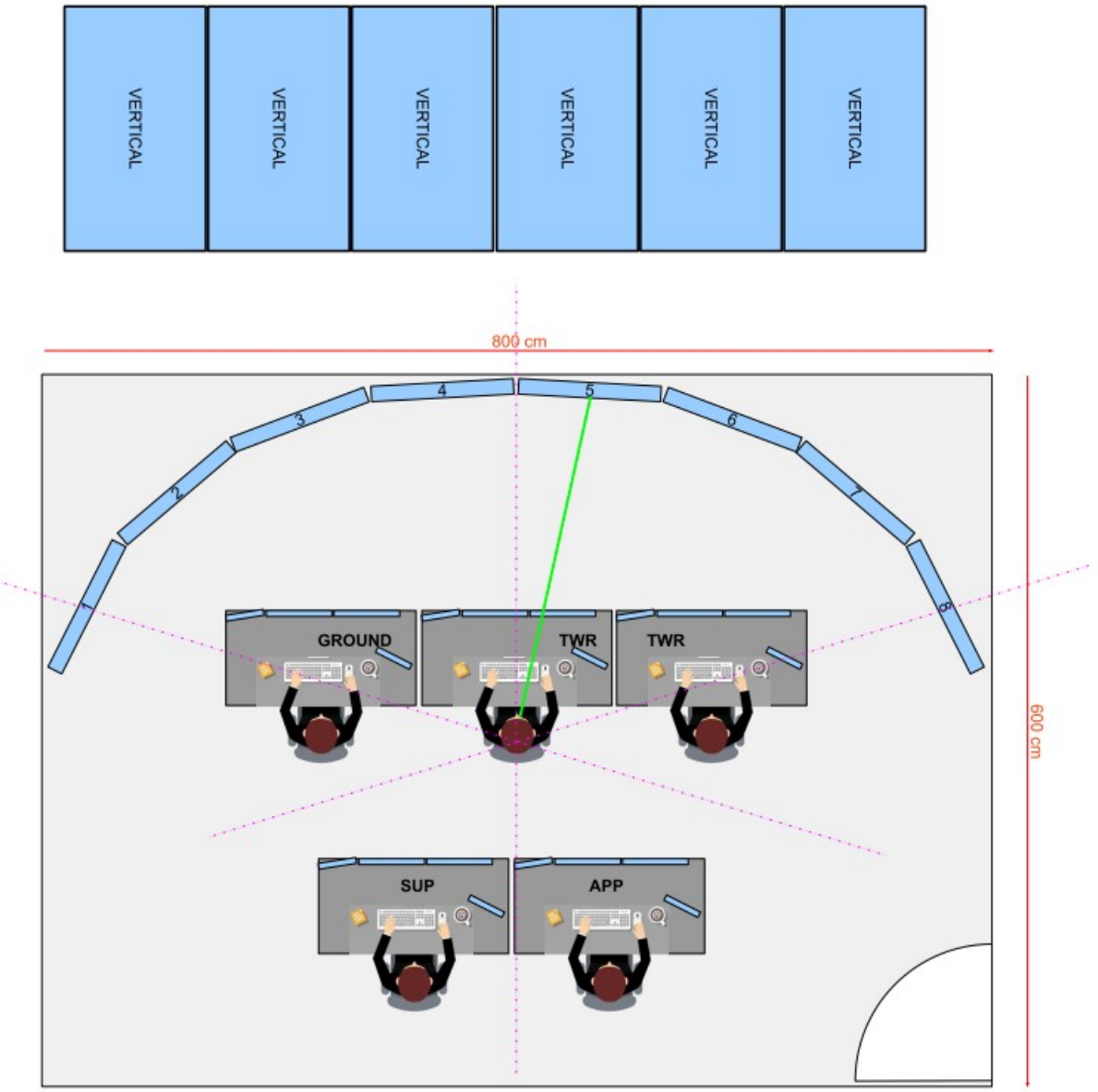

viewing angles of horizontal large displays setup



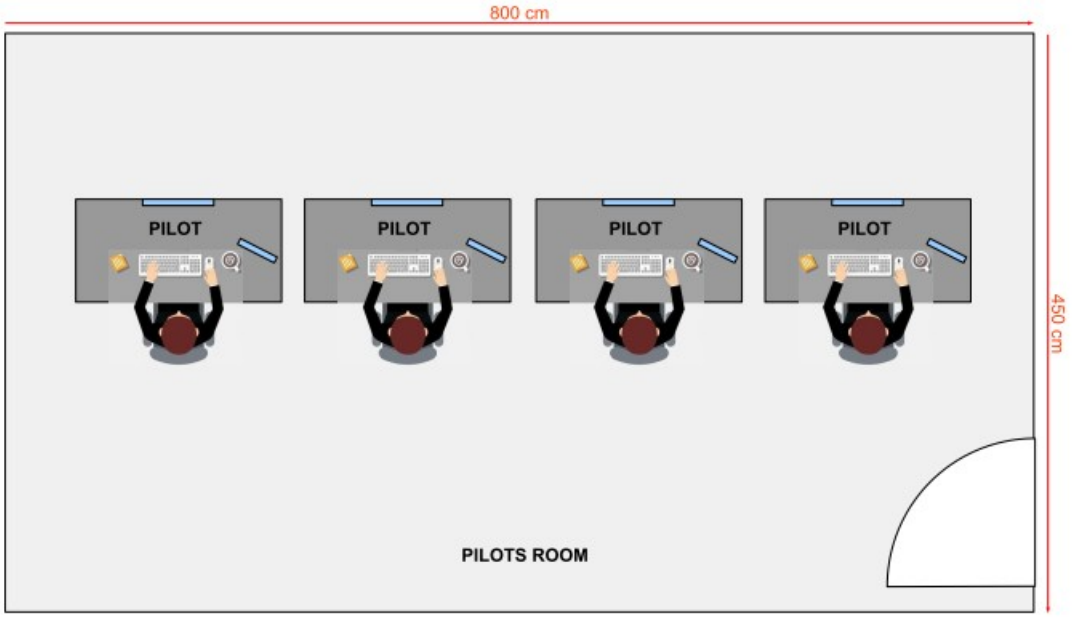

viewing angles of verical large displays setup



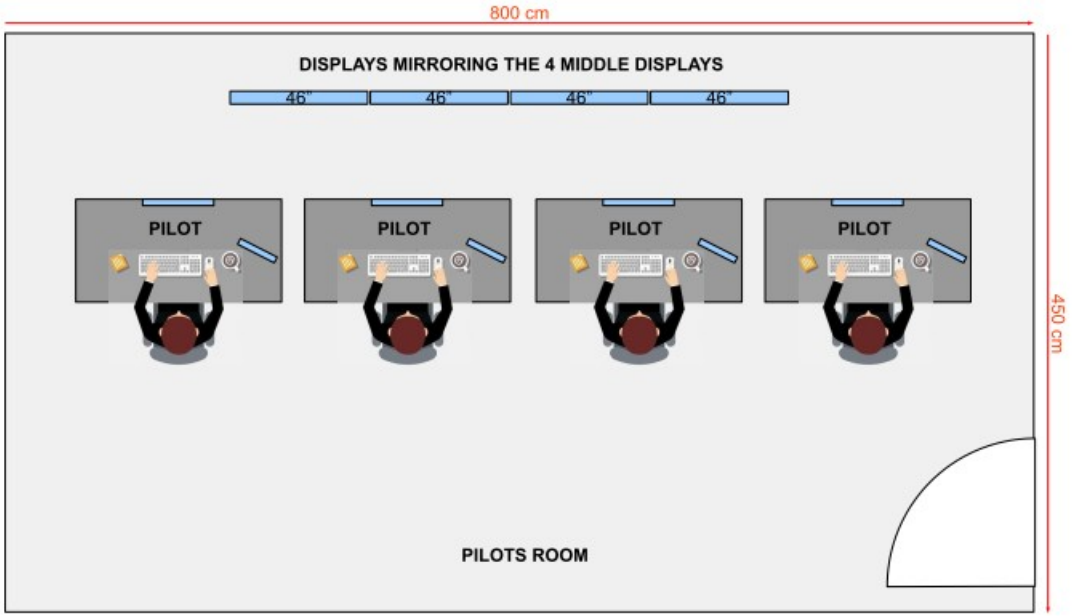

example of of horizontal large displays setup



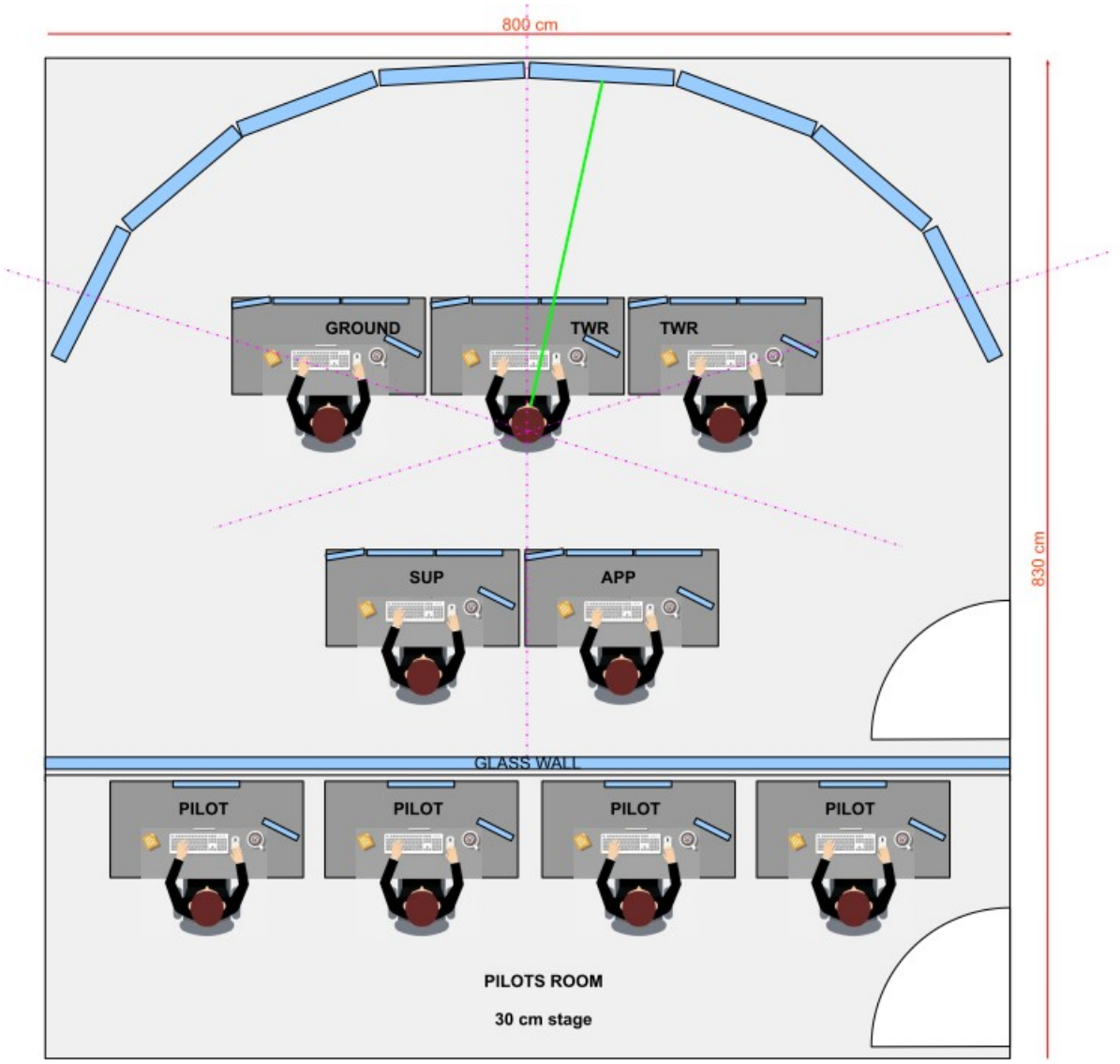

example of of vertical large displays setup




example of pseudopilots array




example of pseudopilots array with small videowall with 3D aerodrome view




example of pseudopilots array with glass wall to see the 3D aerodrome view

example of pseudopilots array with glass wall to see the
3D aerodrome view

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# LARGE LCD SYSTEM

# 3-4 CHANNELS

## viewing angle 190-210°

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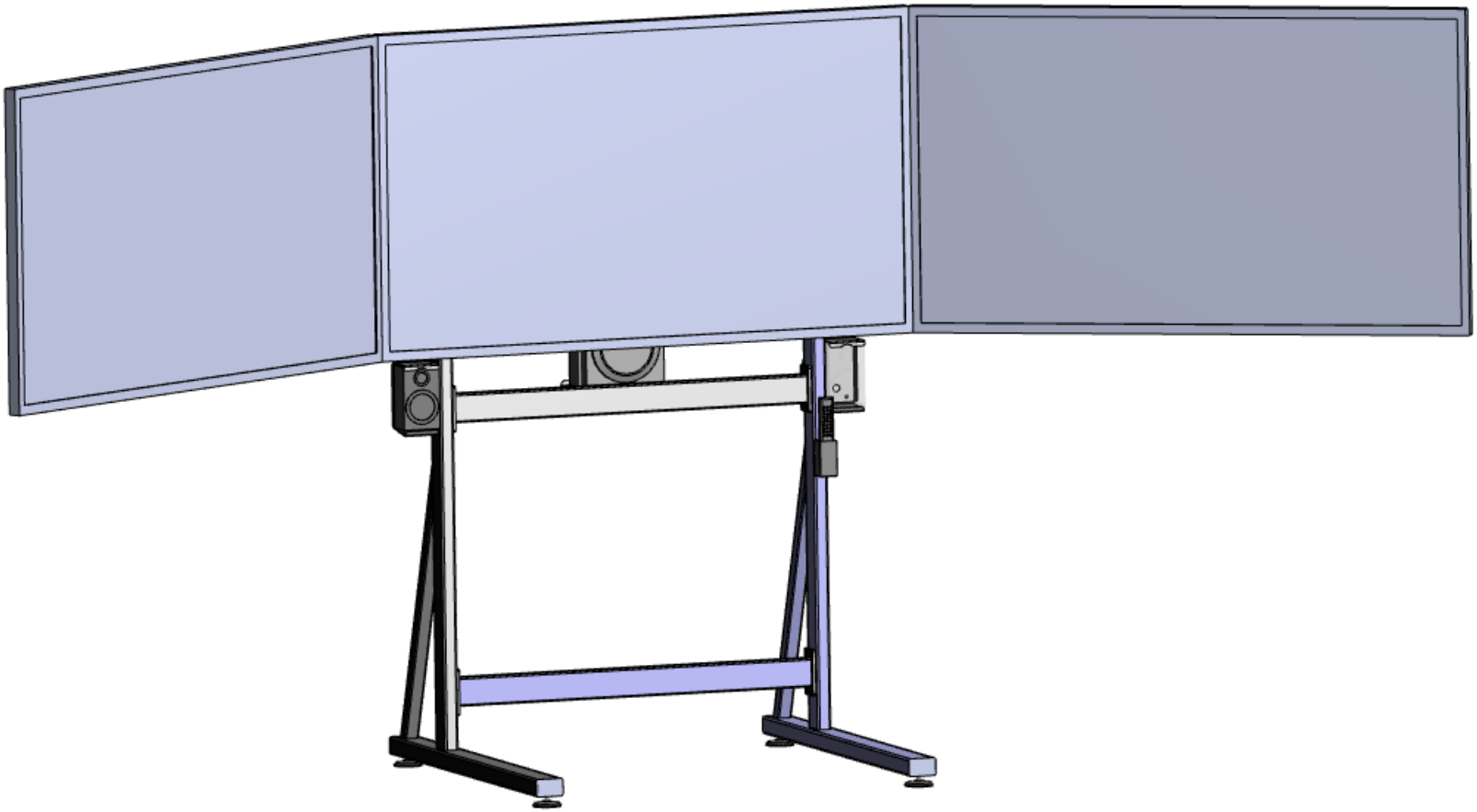

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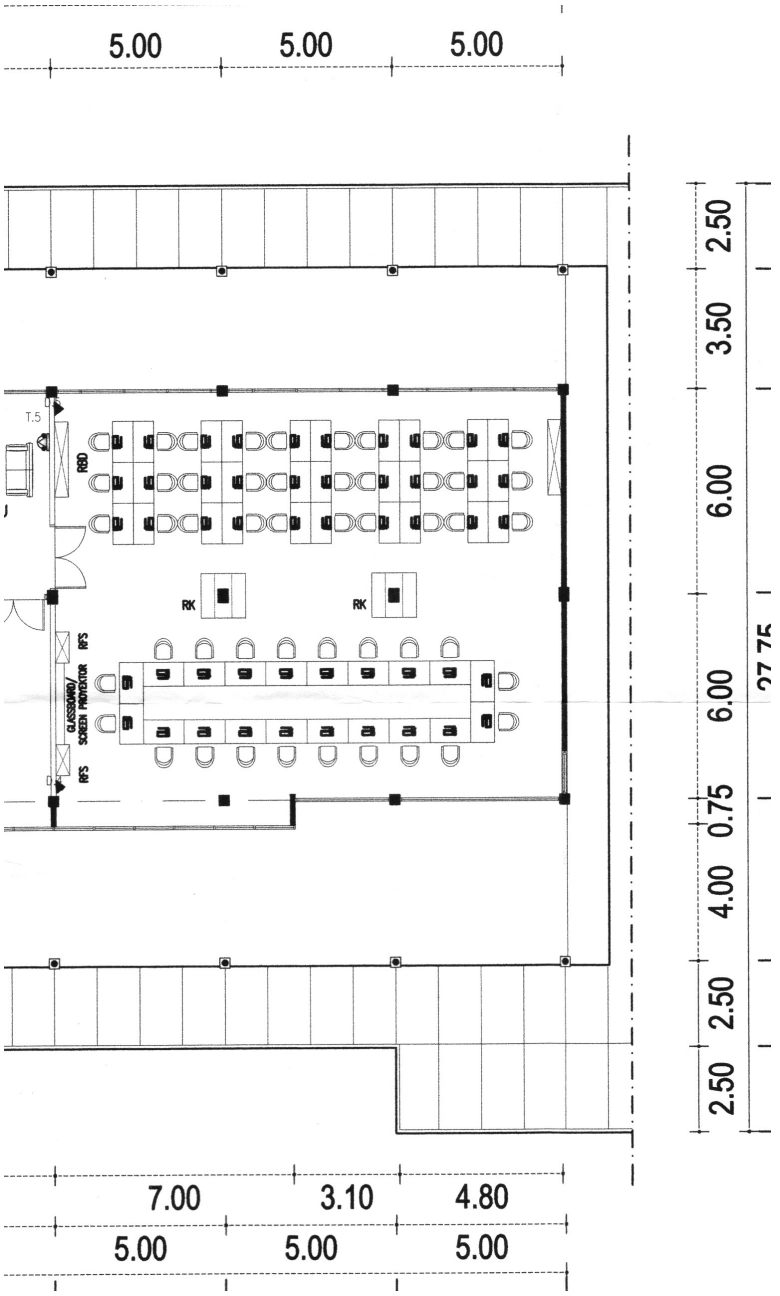
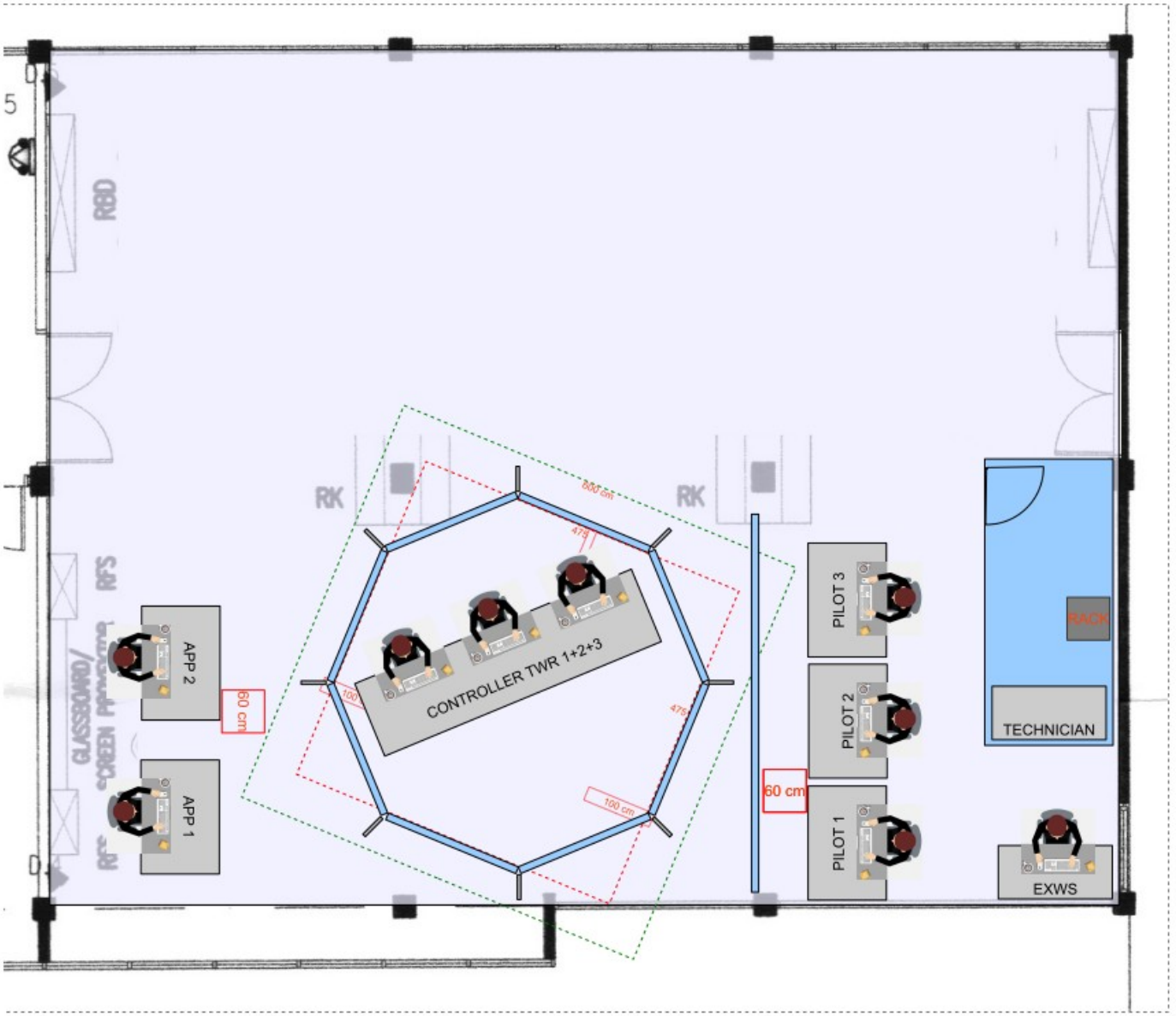
# MEDIUM LCD SYSTEM
# 360 degrees setup

# 9 CHANNELS
## viewing angle 340°-360°

original room



Sim room setup



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so, that's all for
system design


thank you,
you are a great audience

any questions?