Next Generation fire training

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Introduction

Traditional fire training: classroom instruction + practical training.

Now, there are two developments:

1. A higher competency level is required for fire training
2. New technology is available which can increase the effectiveness of the training

Questions

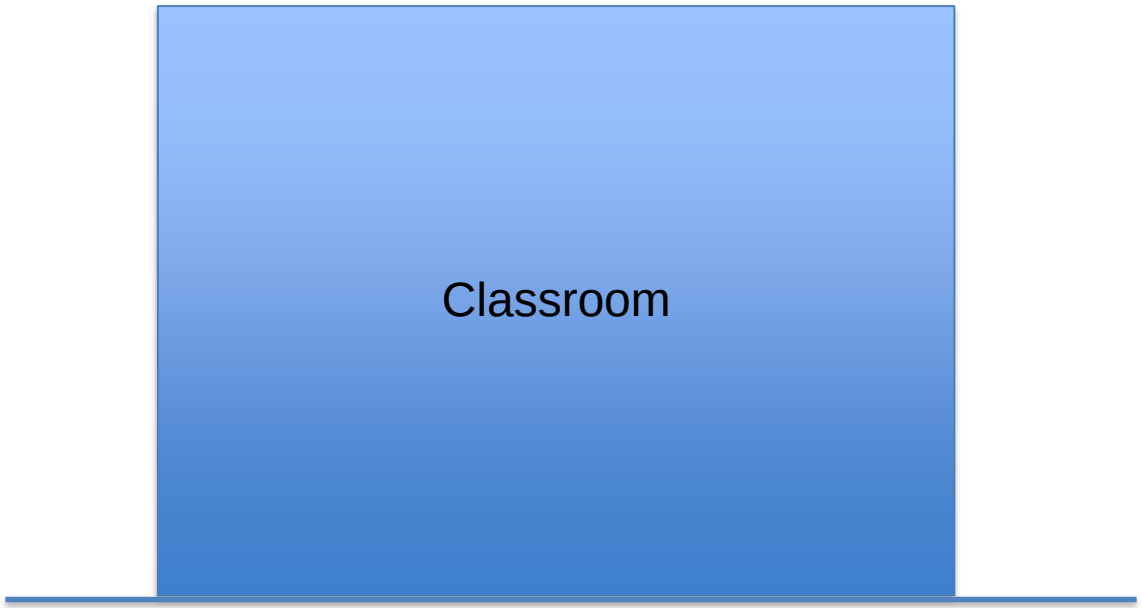
- Is the traditional curriculum still effective?
- Can we complement stand-up instruction with CBT?
- Can we use VR?
- Can we standardize our training?
- Can performance be measured?

1. FIRE TRAINING CURRICULUM

TRADITIONAL CURRICULUM

Classroom

TRADITIONAL CURRICULUM

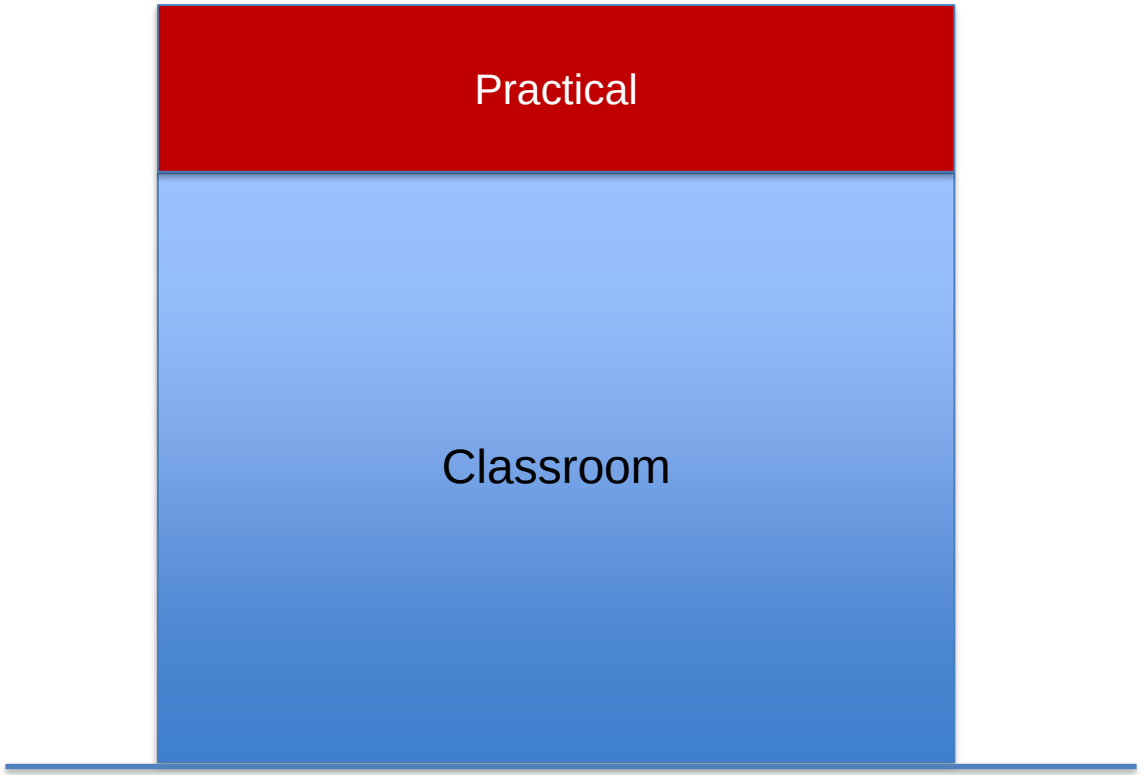


1. Knowledge transfer
2. Introduction to equipment

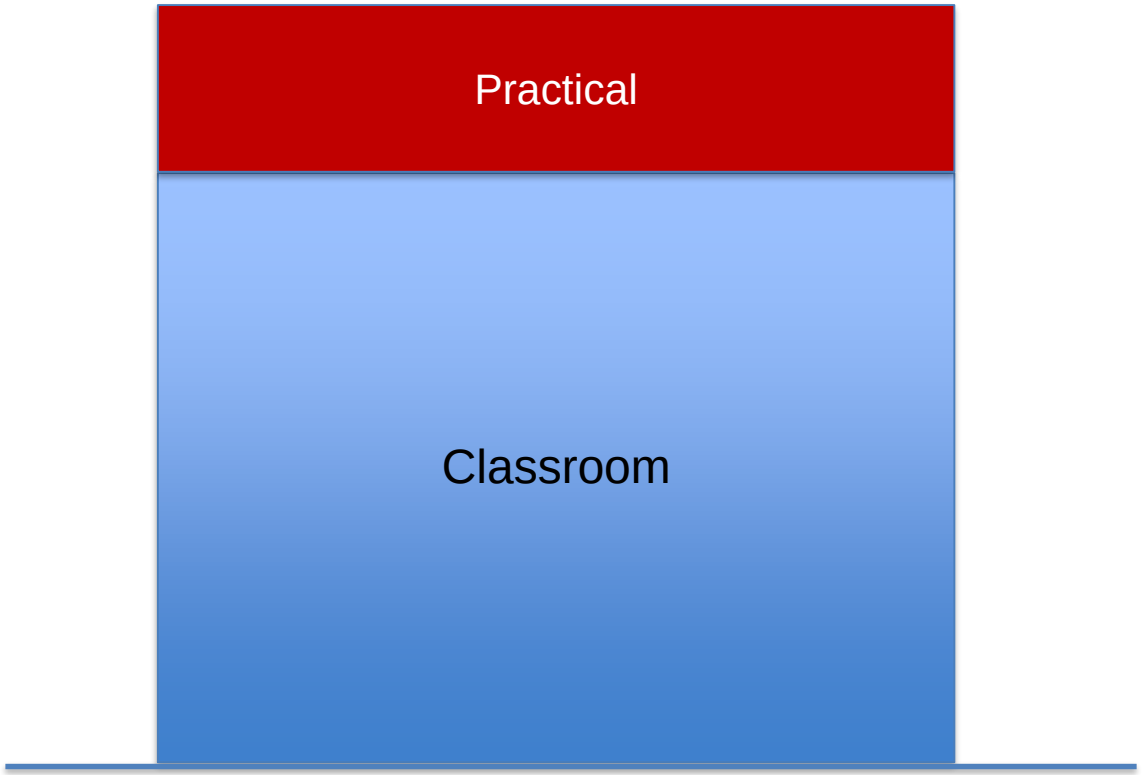
Improvements?

- Efficiency
- Flexibility

TRADITIONAL CURRICULUM



TRADITIONAL CURRICULUM

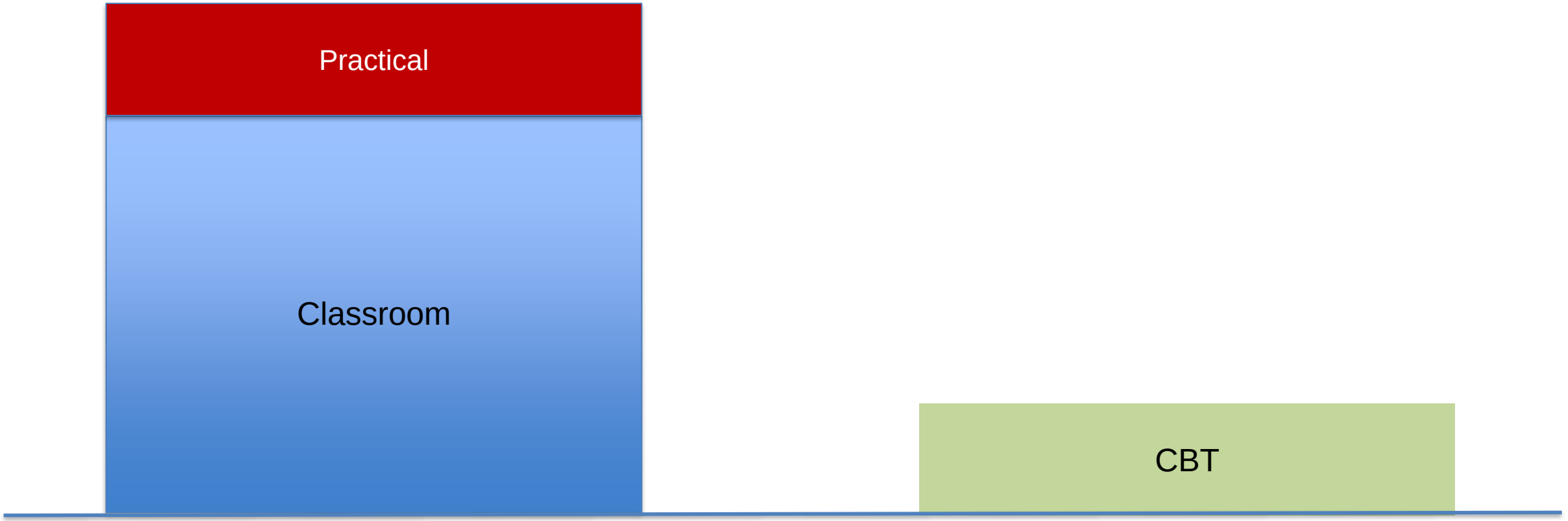


1. Exposure to real fire
2. Handling equipment

Improvements:

- Realistic (equipment, environment, etc)
- Procedures

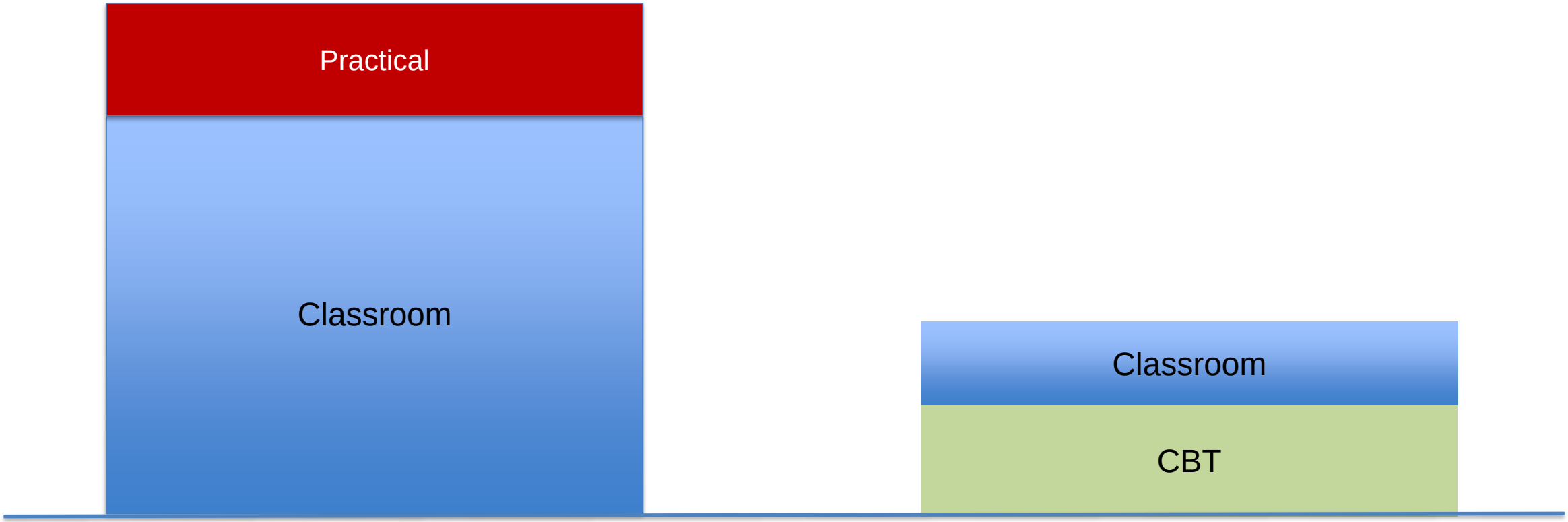
NEW CURRICULUM



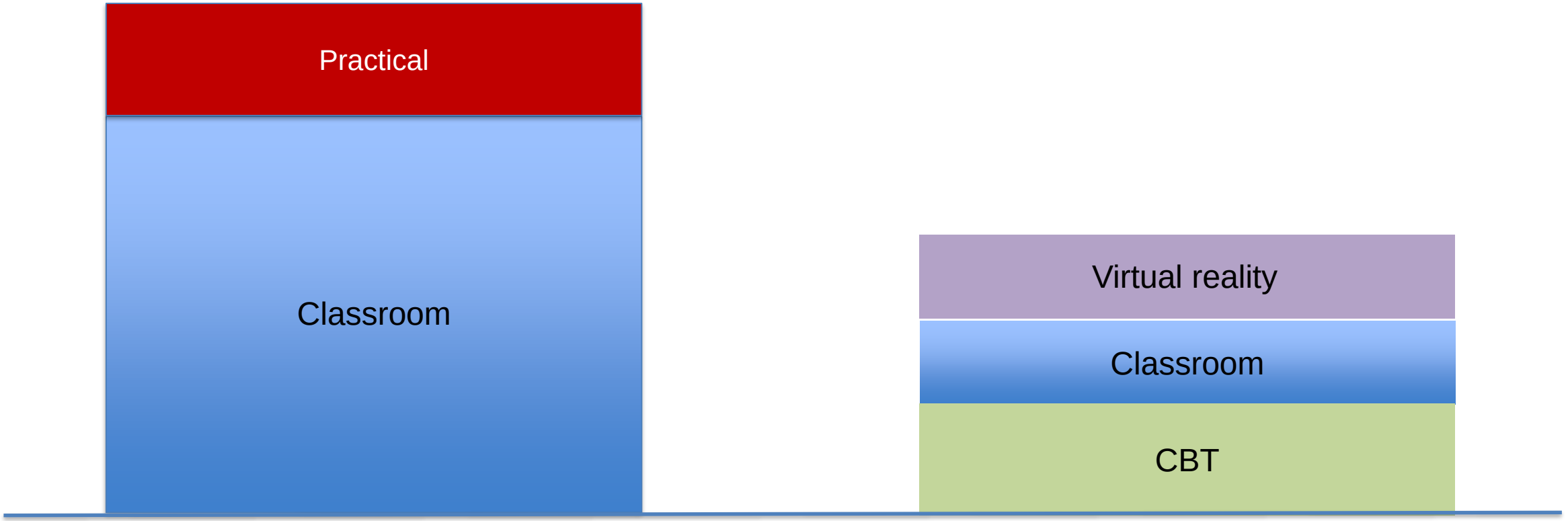
CBT

1. Efficient knowledge transfer
2. Flexible
3. Exams and certificates

NEW CURRICULUM



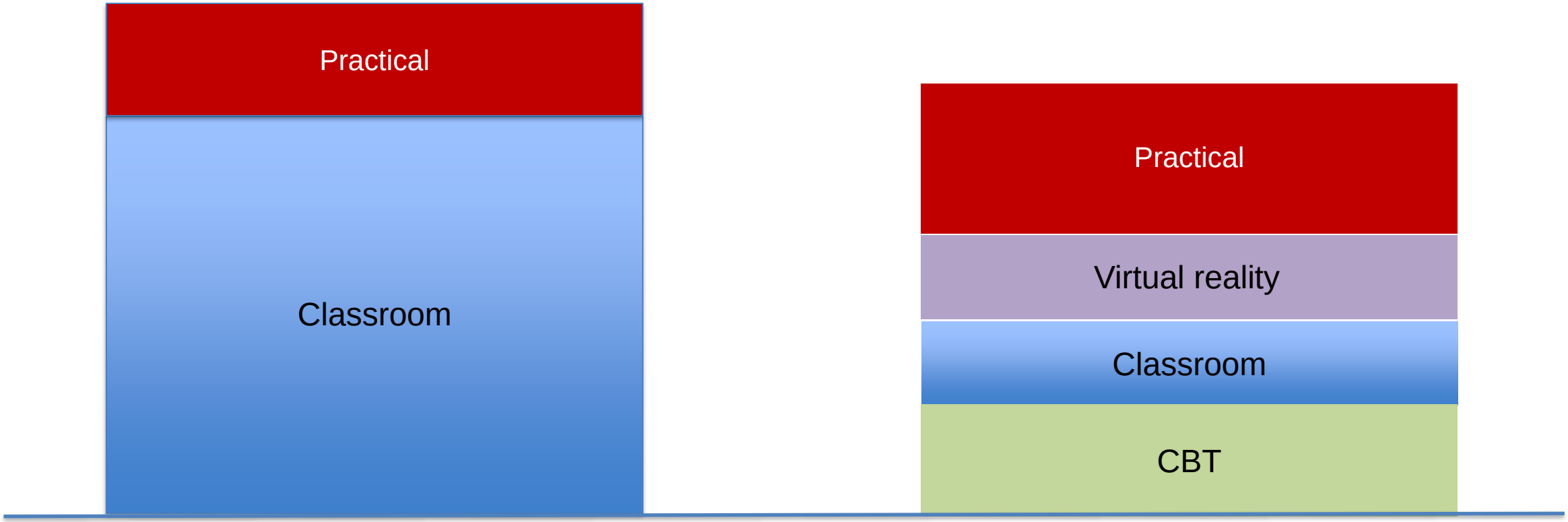
NEW CURRICULUM



VIRTUAL REALITY

1. Preparation for practical training
2. Ideal for training procedures

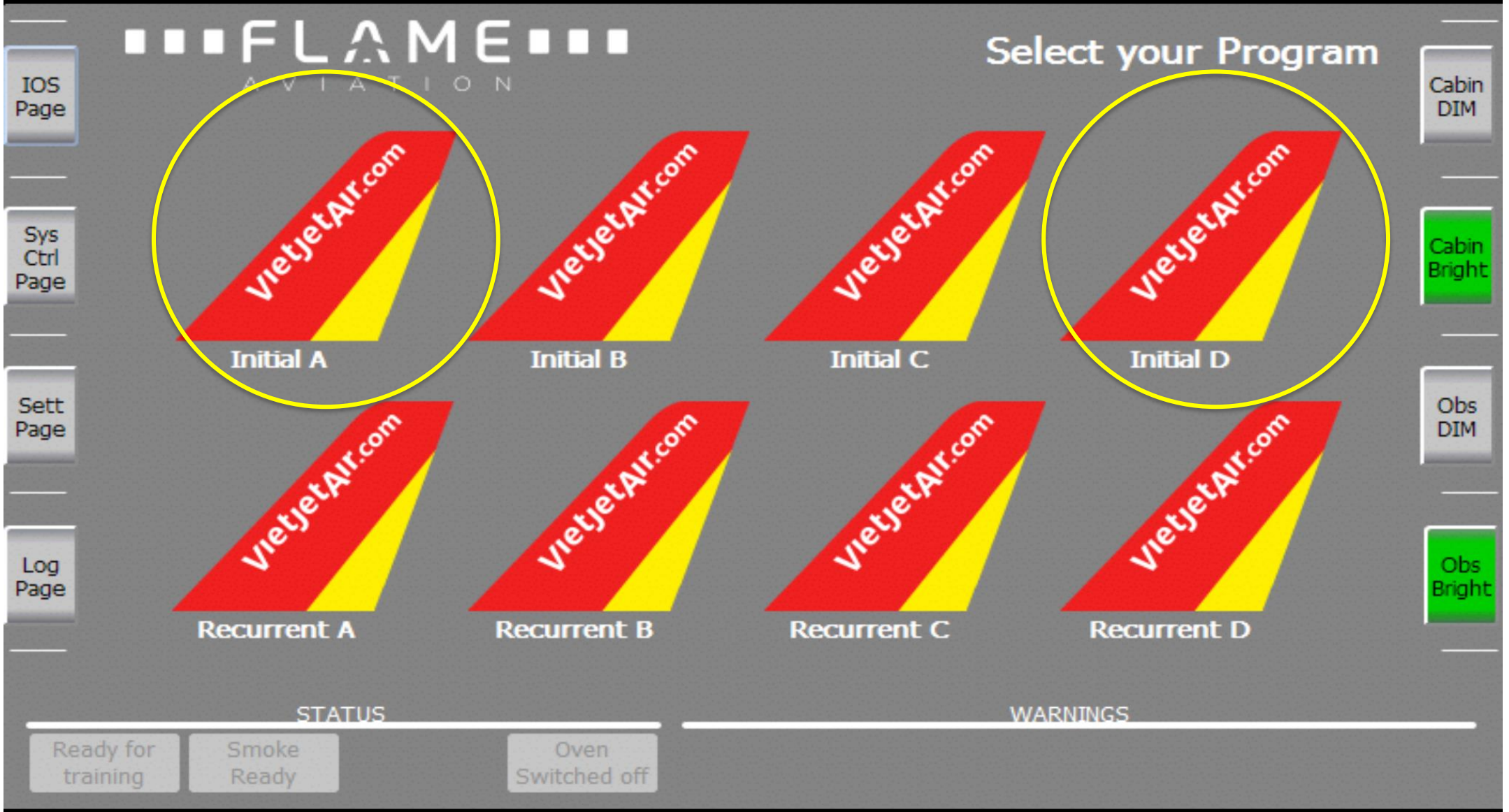
NEW CURRICULUM



PRACTICAL TRAINING

1. Realistic training environment and equipment
2. Exposed to fire, smoke, heat, smell and sound
3. Pre-programmed scenarios

2. STANDARDIZATION OF TRAINING


FLAME
AVIATION
Select your Program
IOS Page
Sys Ctrl Page
Sett Page
Log Page
Cabin DIM
Cabin Bright
Obs DIM
Obs Bright
Initial A
Initial B
Initial C
Initial D
Recurrent A
Recurrent B
Recurrent C
Recurrent D
STATUS
WARNINGS
Ready for training
Smoke Ready
Oven Switched off

Initial A parameters settings

✓ Lighting:	100% (bright)
✓ Smoke density	15% (low)
✓ Cabin panic sound	OFF
✓ Burning smell	OFF
✓ Difficulty level	Level 1 (easy)
✓ Total training time	2,5 minutes (long)
✓ Relight time	12 seconds (long)

Initial D parameters settings

✓ Lighting:	50% (dimmed)
✓ Smoke density	75% (high)
✓ Cabin panic sound	ON
✓ Burning smell	ON
✓ Difficulty level	Level 4 (hard)
✓ Total training time	1,5 minutes(short)
✓ Relight time	6 seconds(short)

1. Present different scenarios for initial training or for recurrent training
2. Incidents from the line can be incorporated
3. Scenarios run automatically
4. Everyone is presented the same scenario: standardization of training

3. OBJECTIVELY MEASURING PERFORMANCE

FLAME
AVIATION

Initial A

INSTRUCTOR PAGE

IOS Page

Sys Ctrl Page

Sett Page

Log Page

Cabin DIM

Cabin Bright

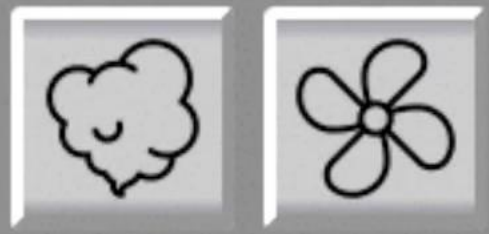
Obs DIM

Obs Bright

SCENARIOS

DESELECT

SMOKE



FIRE TRAINING PROGRESS

Select your Program

Switch icons to text

STATUS

Ready for training

Smoke Ready

Oven Switched off

WARNINGS

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AVIATION

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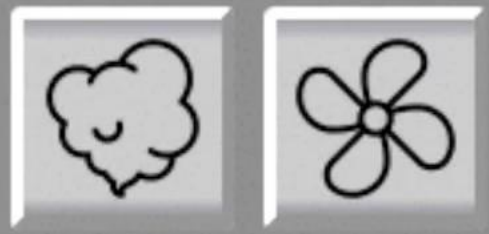

FIRE TRAINING PROGRESS

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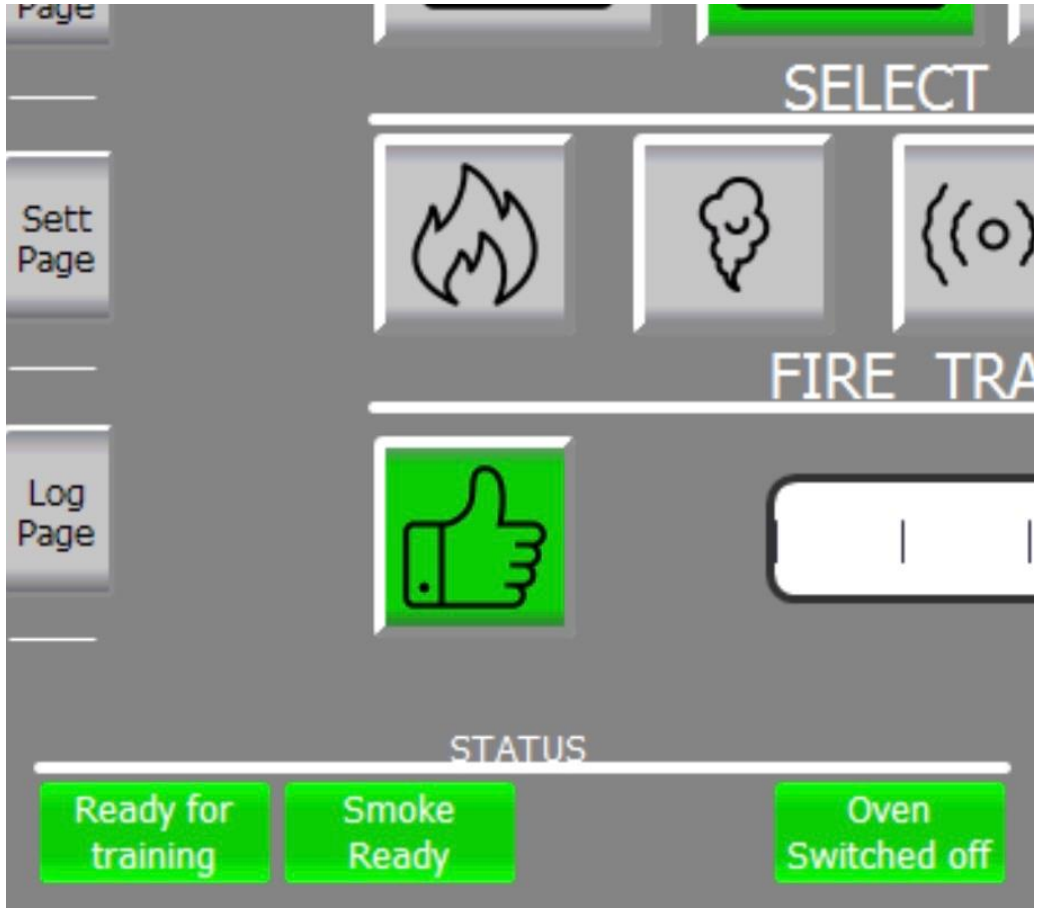

1. Sensors are measuring the performance
2. Difficulty and circumstances are configurable
3. Everyone is assessed by the same criteria: *objectively measuring performance*
4. Possibility to link results to your LMS

Questions

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Thank you, for your attention!