

# HEALTH TECHNOLOGY ASSESSMENT : CHOICE BETWEEN CYTOTOXIC SAFETY CABINETS AND ISOLATORS FOR CYTOTOXIC DRUG RECONSTITUTION

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CP-230

## OBJECTIVES

In order to implement a centralized cytotoxic reconstitution unit (CCRU) at the national center of bone marrow transplant (NCBMT) in Tunis, a health technology assessment study has been conducted. In a CCRU, two types of equipment can be used: cytotoxic safety cabinets (CSCs) and isolators.

The aim of this study is to compare the implementation costs of a CCRU equipped with a CSC with the implementation costs of a CCRU equipped with an isolator.

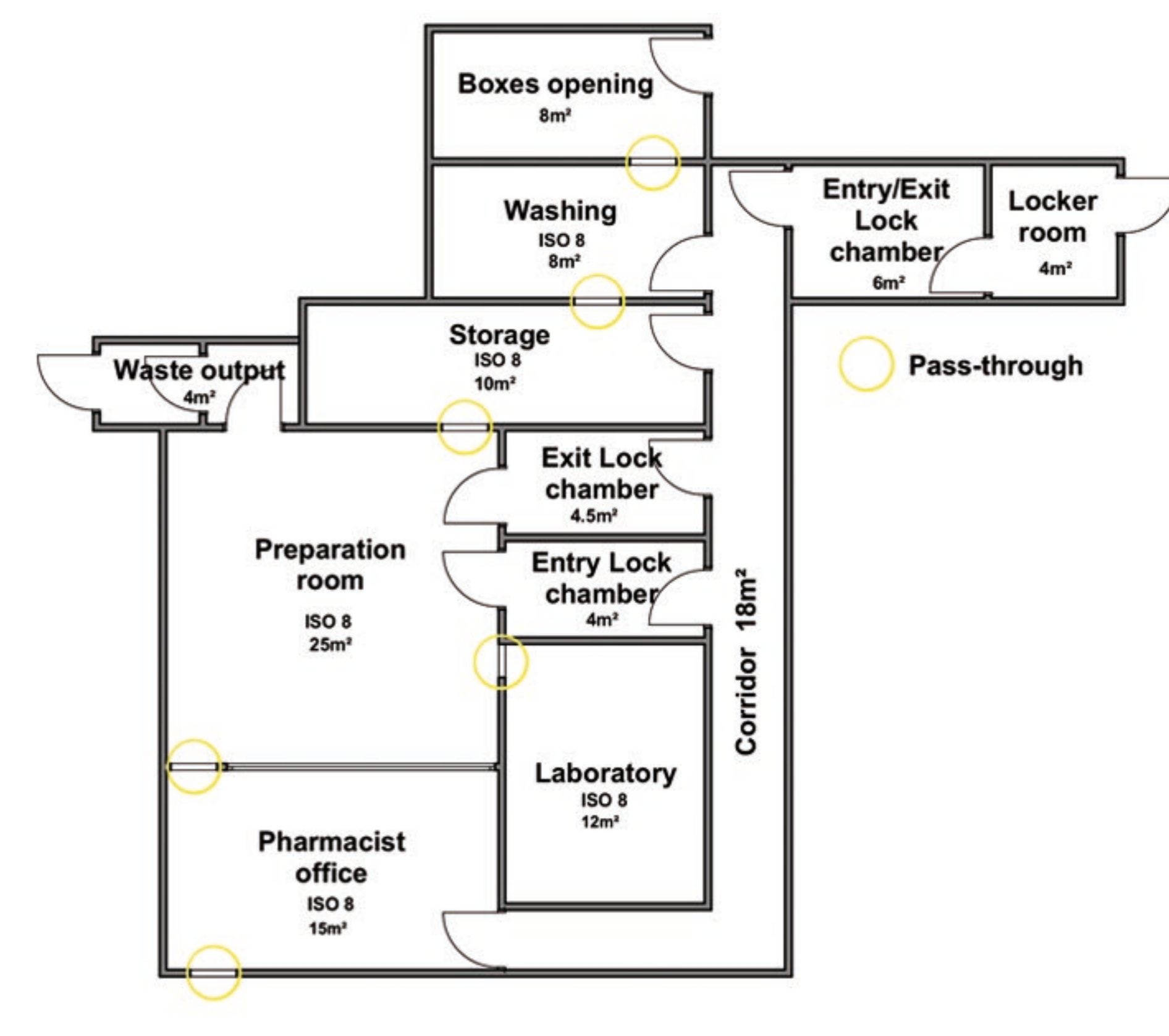
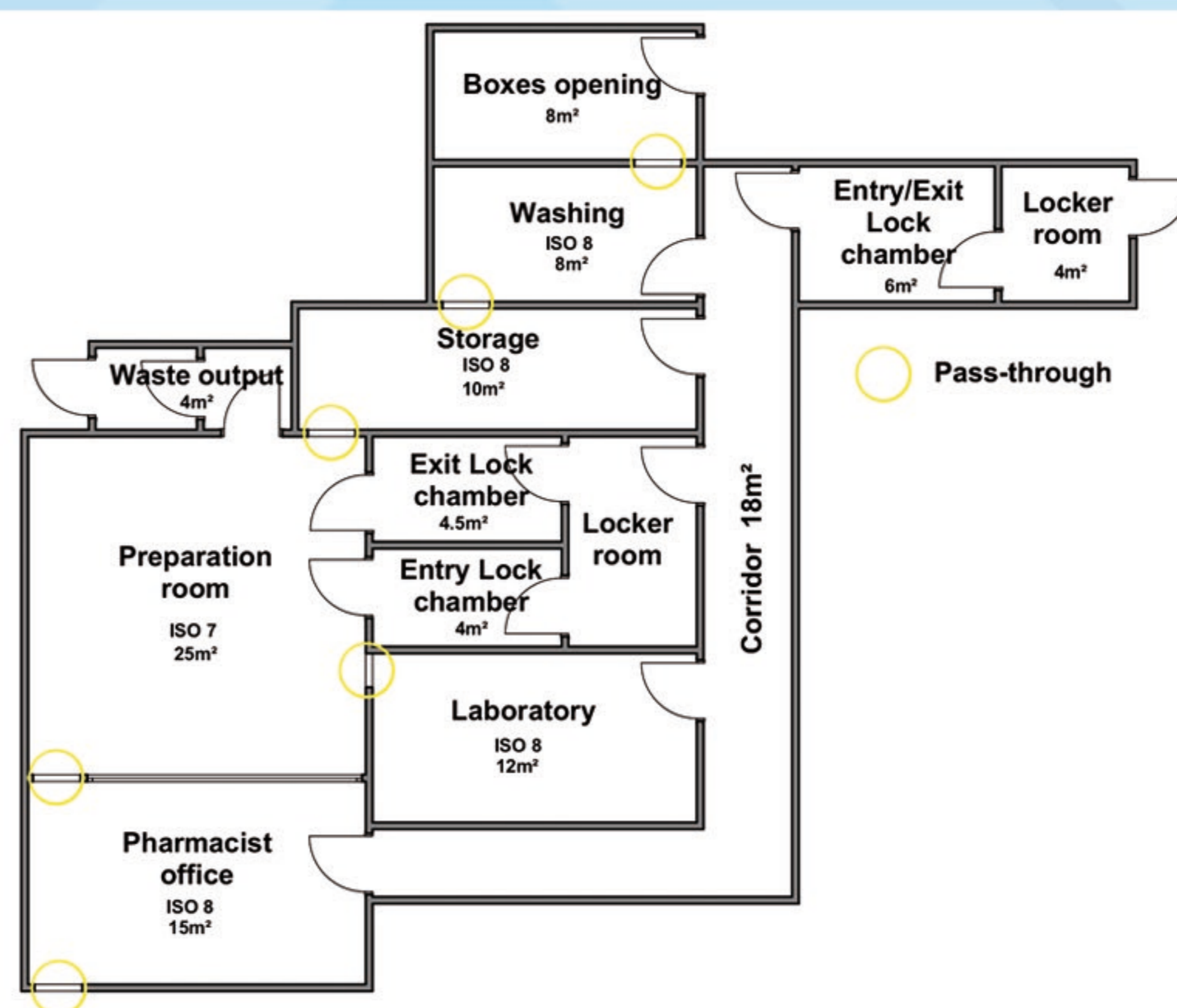
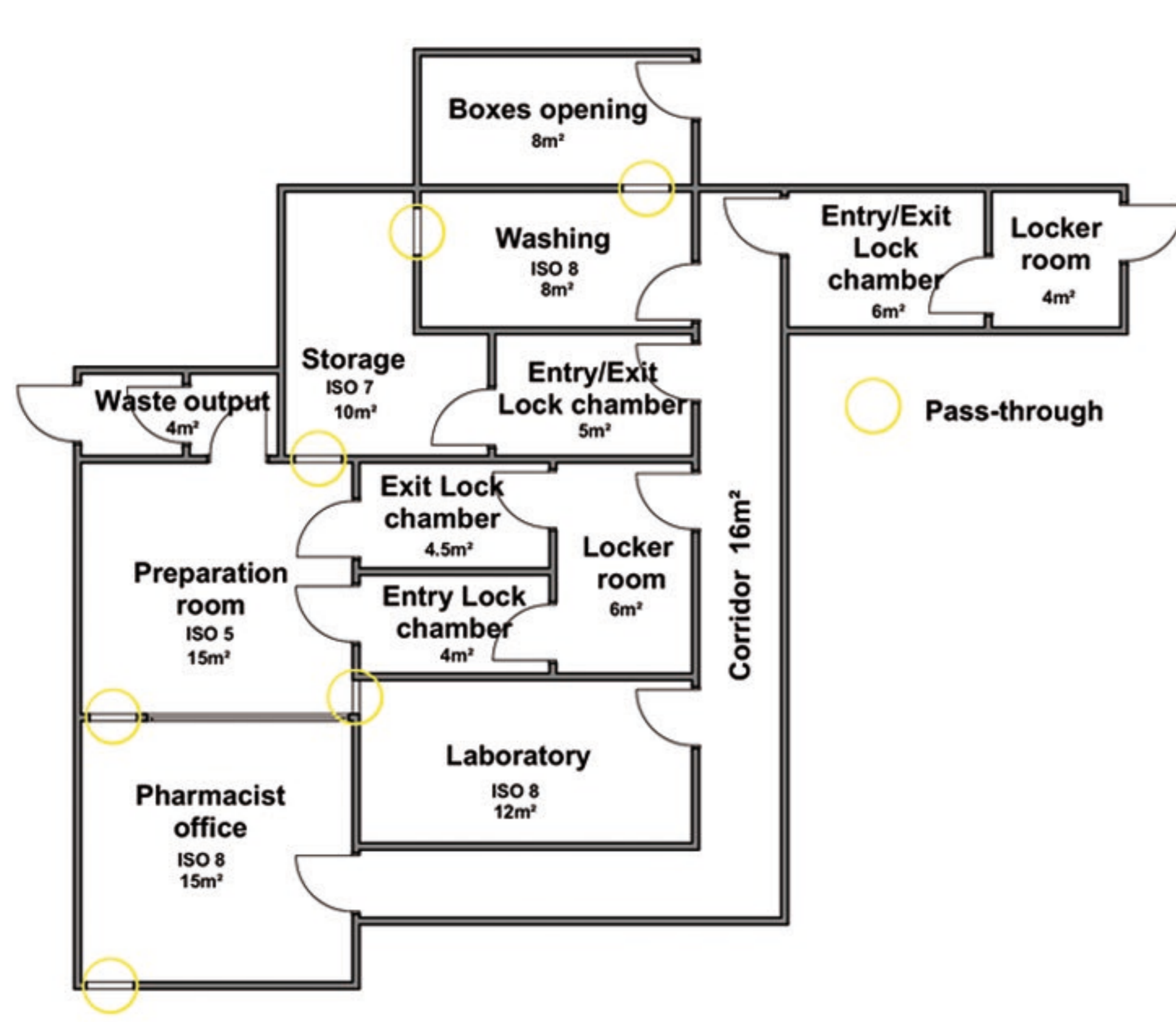
## STUDY DESIGN

1- Three plans were elaborated

CCRU equipped with a cytotoxic safety cabinet (CSC)

CCRU equipped with a negative pressure isolator

CCRU equipped with a positive pressure isolator



Preparation room surface :  
**15 m<sup>2</sup>**

Preparation room surface :  
**25 m<sup>2</sup>**

Preparation room surface :  
**25 m<sup>2</sup>**

Preparation room air quality:  
**ISO 5**



Preparation room air quality:  
**ISO 7**



Preparation room air quality:  
**ISO 8**



### Operator Clothing

- Hood or other head covering
- Mask
- Sterile clothing gripped at wrist with raised collar
- Sterile or disinfected boots or overshoes
- Sterile, Non-powdered gloves

### Operator Clothing

- Hair Covering Normal
- Mask
- Clothes gripped at wrist with raised collar
- Overshoes
- Sterile, Non-powdered gloves

### Operator Clothing

- Hair Covering Normal
- Mask
- Protective Clothing
- Overshoes
- Sterile, Non-powdered gloves

2-Requests for quotes for the following items were sent to different suppliers

Equipment purchase (CSC or Isolator)

Equipment qualification

CCRU arrangement

CCRU air treatment

Operator clothing

## RESULTS

CCRU	CCRU equipped with a cytotoxic safety cabinet (CSC)	CCRU equipped with a negative pressure isolator	CCRU equipped with a positive pressure isolator
Average cost (Euro)			
Equipment purchase	24 000	140 000	
Equipment qualification	822	1 677	
CCRU arrangement	87 196	89 500	78 628
CCRU air treatment	163 687	128 340	95 270
Clothing / Operator / Day	295	152	9
Total Cost	276 000	359 669	315 584

## DISCUSSION

Due to the big difference in the purchase costs of isolators and CSCs (140 000€ vs 24 000€ respectively), the overall cost for the implementation of a CCRU equipped with an isolator is higher than a CCRU equipped with a CSC.

Whereas, if we exclude the equipment purchase costs, the overall CCRU implementation and operator clothing costs become :

- 252 000€ in the case of a CSC
- 219 669€ in the case of a negative pressure isolator
- 175 584€ in the case of a positive pressure isolator

## CONCLUSION

This work should be completed by a study of the operating costs (other than operator clothing costs) of the three types of CCRU in order to optimize the resources and find out the less expensive system.

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