

# BSL-3/ABSL-3 Facility Options

## — A Comparison of Design and Operational Approaches

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### ABSTRACT

**Background:** Defining SOPs for high containment facilities ensures the facility will function as required when occupied. These concepts include how the research is conducted as well as movement of personnel, animals and material within the containment boundary.

**Methods:** Research capabilities are enhanced when key functions are properly located within the building and the protocols are effectively articulated. This is reflected in the design to increase personnel safety and safeguard the containment boundaries, as well as improve research programs and facility performance. Three examples of design models show how containment operates based on varying SOP requisites.

**Results:** An outline of critical SOPs early in the design process will reduce or eliminate negative impacts on costs relative to square footage, design schedule, construction capital and operating costs.

**Conclusions:** Early SOP communication and collaboration with your design team will establish the proper foundation for a building that will function safely, within the expectations of containment design, adapt to your operational needs and enhance your research environment.

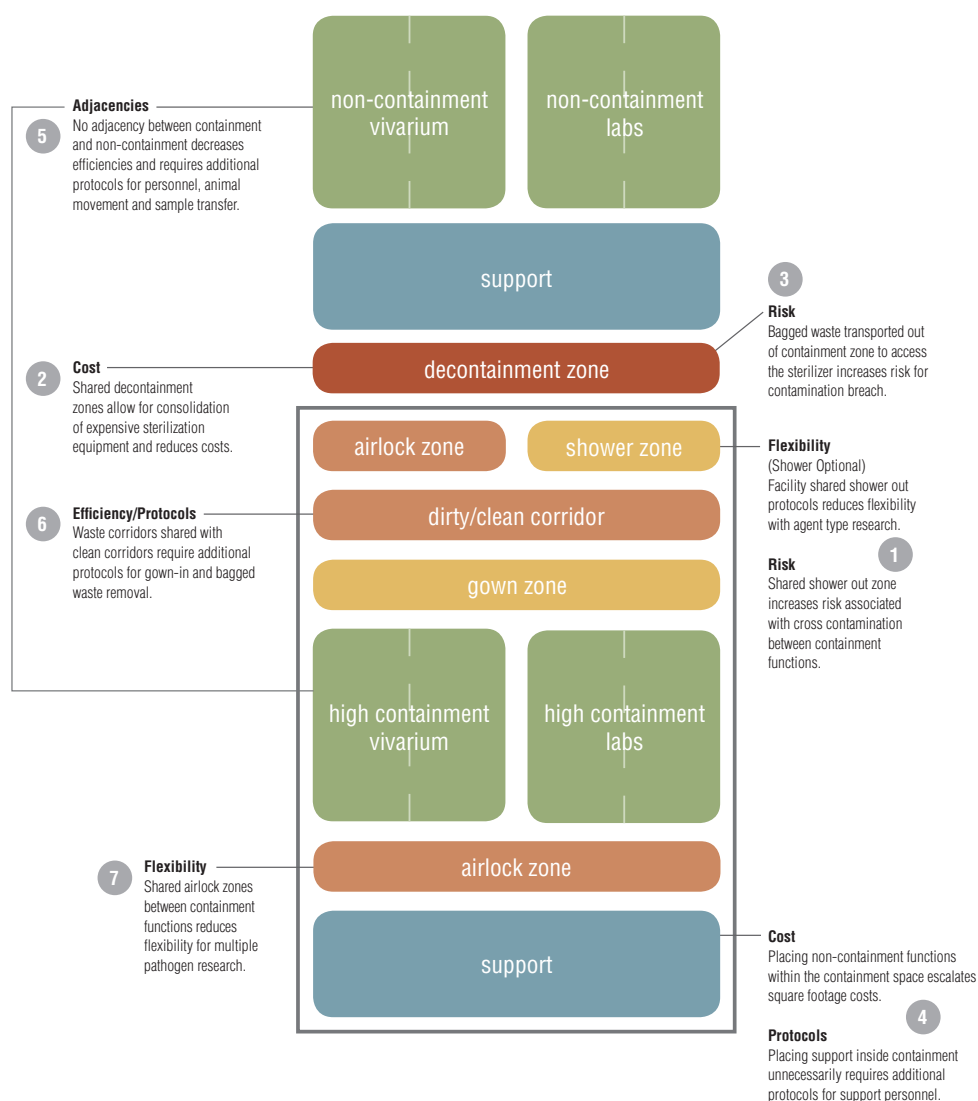
### Evaluation of:

- Room and zone adjacencies/relationships
- Equipment (decontamination) location/consolidation
- Change rooms/shower out protocols
- Sample transfer

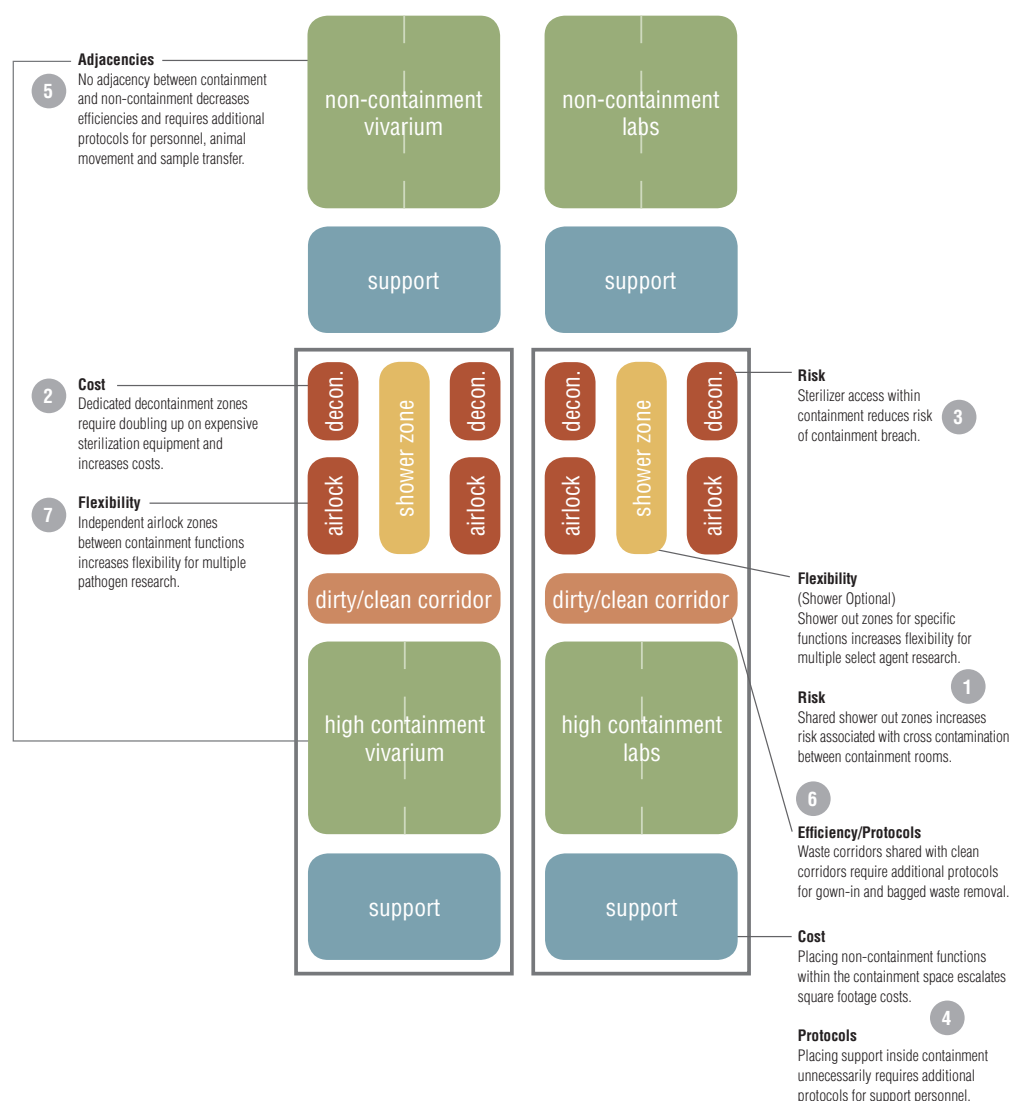
### Impacts:

- Operational costs
- Construction costs
- Process flows and SOPs

### CENTRALIZED CONTAINMENT - ONE ACCESS POINT



### MULTIPLE DE-CENTRALIZED CONTAINMENT ZONES - ONE ACCESS POINT



### CENTRALIZED CONTAINMENT - MULTIPLE ACCESS POINTS

