

# THE BUILT ENVIRONMENT'S INFLUENCE ON RESILIENCE OF HEALTHCARE SERVICES: LESSONS LEARNT FROM THE COVID-19 PANDEMIC

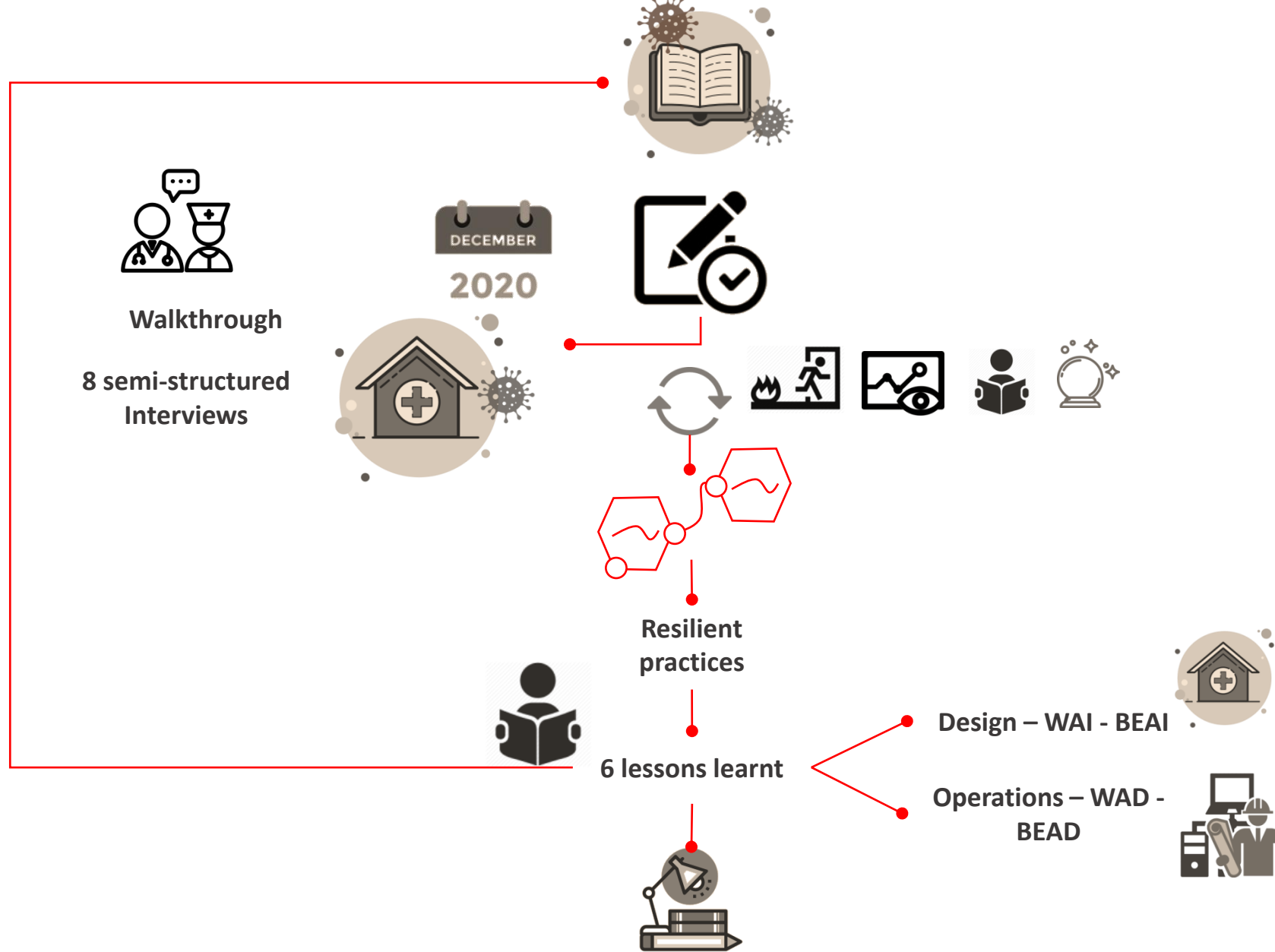
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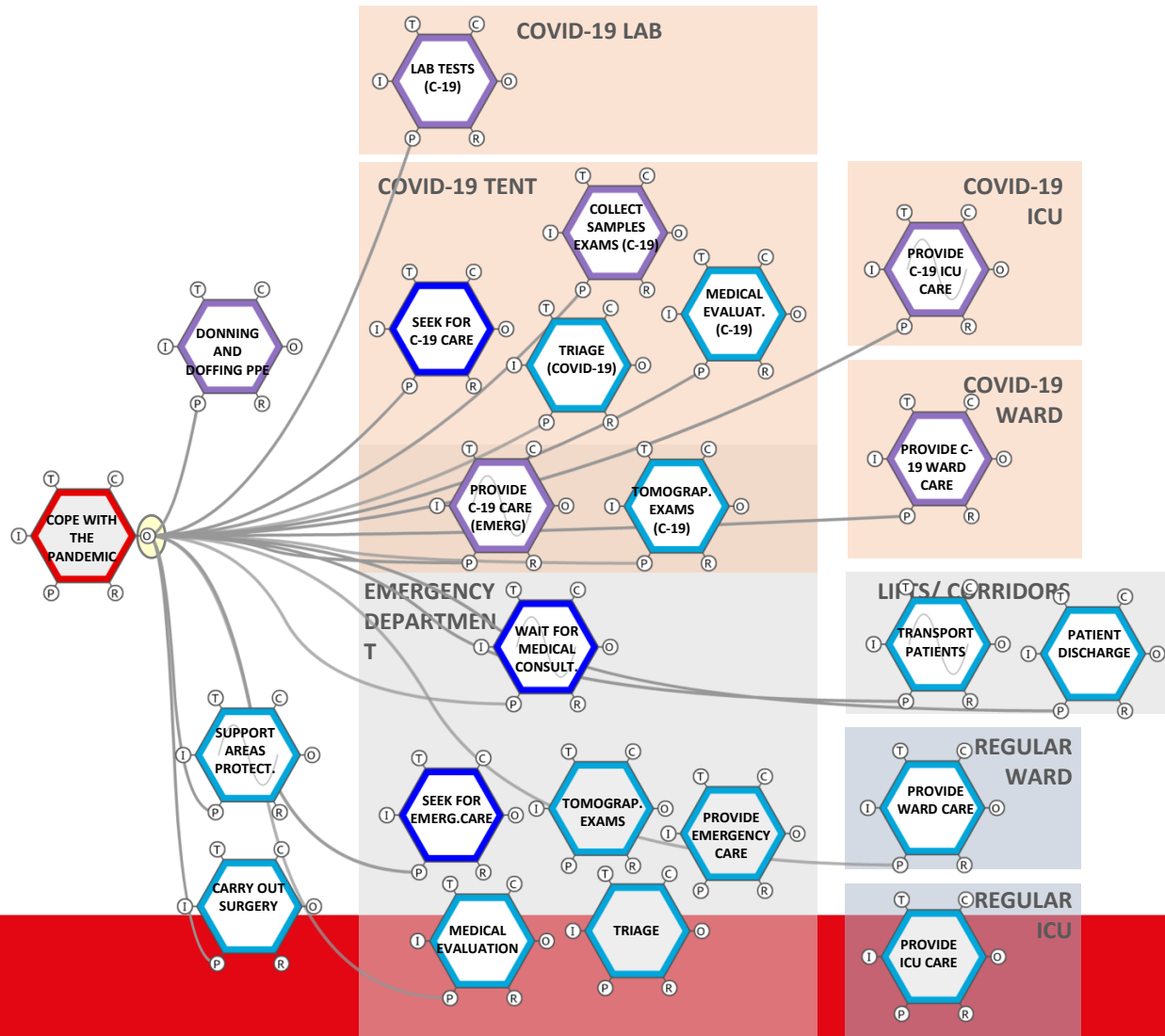
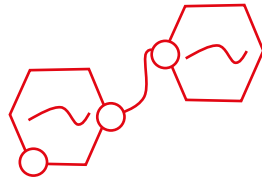
# INTRODUCTION

- Lessons learned by a leading private hospital in Southern Brazil.
- Lens resilience engineering.
- Implications for services and the built environment.





# PROCESSES MODELLING



## FRAM model

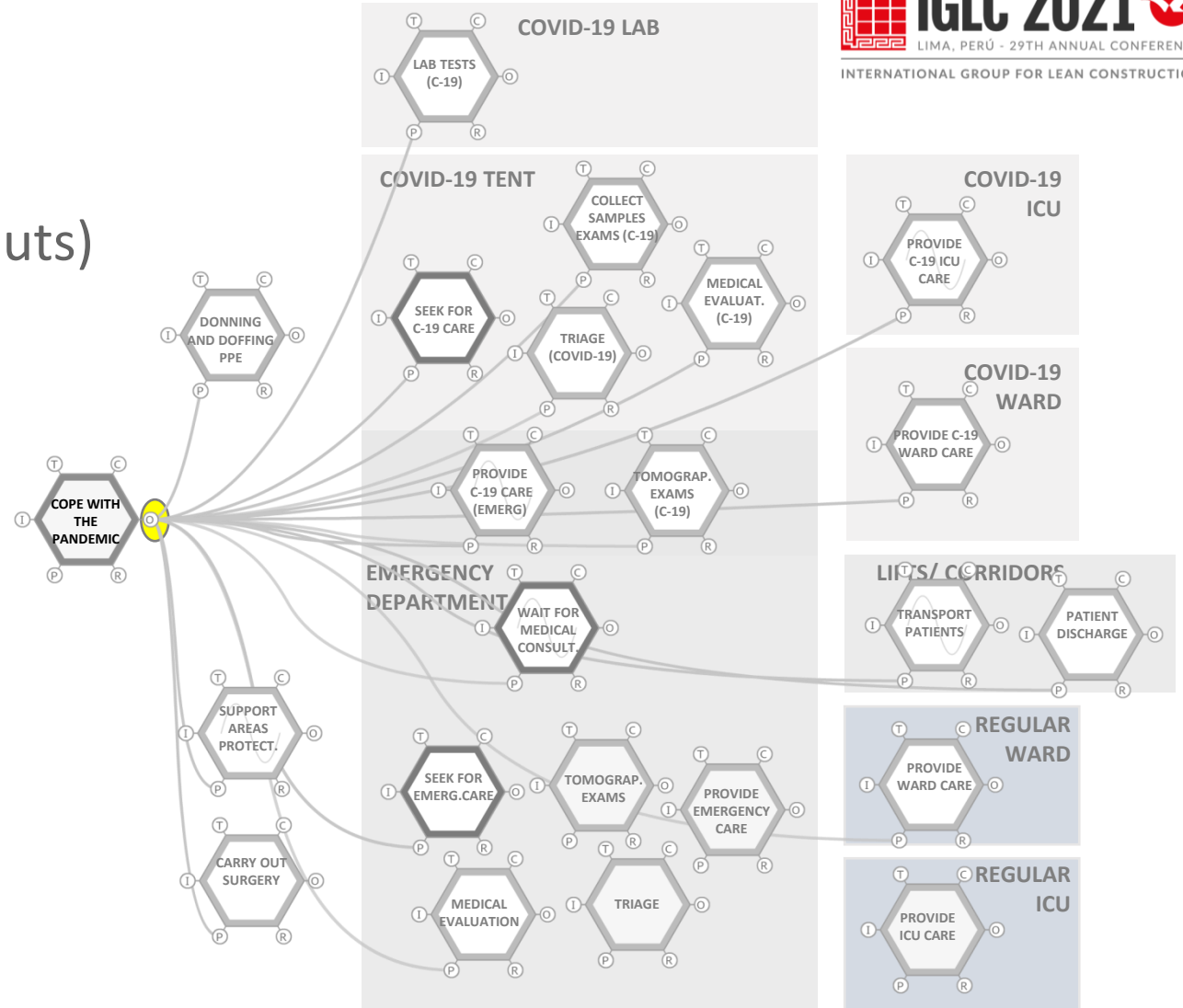
-  Performed by staff
-  Performed by patients
-  New Functions

# RESULTS

Resilient practices

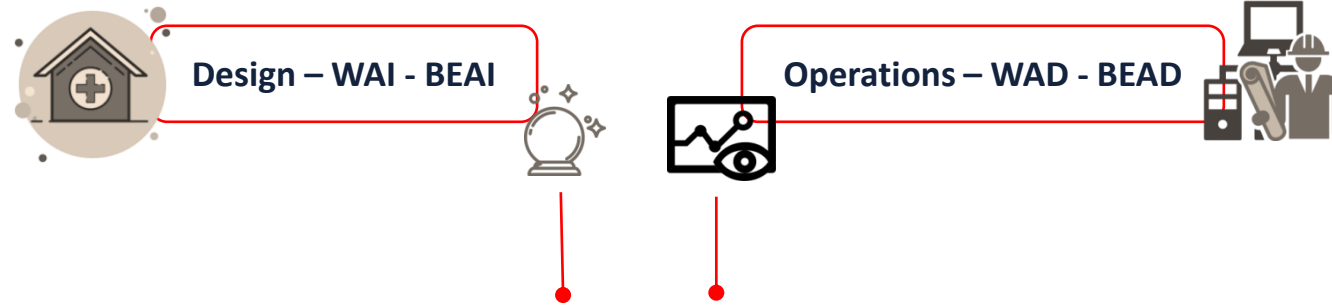
## COPE WITH THE PANDEMIC: COVID-19 (outputs)

- Adaptations built environment (care + support areas)
- COVID-19 tent / lab
- Review + purchase inventory buffer
- Reallocation and optimization resources



# DISCUSSION

6 lessons learnt



CAPACITY x DEMAND

“Built environment-as-imagined (BEAI)” x “Built environment-as-done (BEAD)”

*Ransolin et al., 2020*

# DISCUSSION

6 lessons learnt



Design – WAI - BEAI



Operations – WAD - BEAD



- To design flexible workspaces;
- To design short patient flows (contagious diseases).



# DISCUSSION

6 lessons learnt



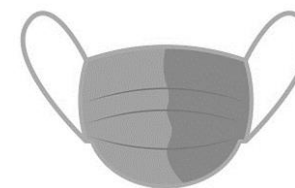
Design – WAI - BEAI



Operations – WAD - BEAD



- To save financial resources for acquiring scarce supplies and maintain a multi-skilled workforce (capacity x demand);
- To develop capabilities for resources optimization;
- To use wayfinding to communicate changes built environment;
- To strengthen collaborative organizational culture.





# DISCUSSION

6 lessons learnt



Design – WAI - BEAI

Operations – WAD - BEAD



- Bridge the gap BEAI x BEAD
- Resilient healthcare x evidence-based design.
- Update the lessons learnt as the pandemic evolves and retrospective in-depth studies.

# THANK YOU!

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