TACKLING COVID-19

In a Built Environment
SILA's Approach

THE NEW NORMAL

- The emphasis of COVID-19 on **Health & Well Being** = to the emphasis that 9/11 brought on **Security**

- Black Swan Event – Alter the course of our **Behaviors in Society**

- **Transparency and Communication** Paramount

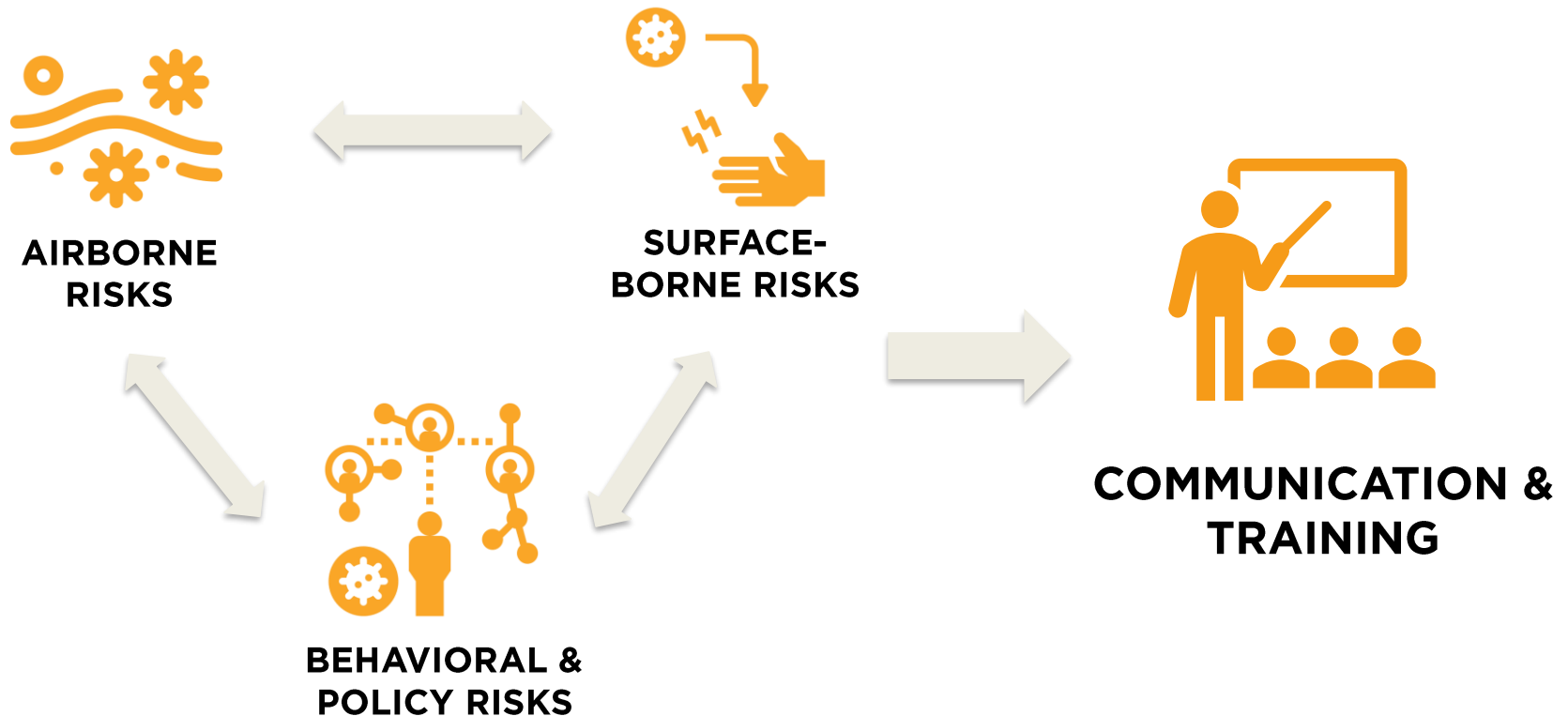- All stakeholders Occupying a Built Environment **Will Have to Work Together**

SILA's Approach

Continuous Learning – A large team conducting global research on processes, technology, and best practices.

OUR APPROACH

A **holistic approach** is the only solution order to tackle COVID-19:

AIRBORNE RISKS

SURFACE-BORNE RISKS

BEHAVIORAL & POLICY RISKS

COMMUNICATION & TRAINING

We will only succeed if all of the above are addressed together.

TACKLING THE AIRBORNE RISKS

The size of the COVID-19 virus is 0.08 to 0.14 microns; however, it survives in air droplets of 0.1 to 0.3 microns in size for up to 3 hours. Given its small size, most of our air handling units and systems are not equipped to deal with it effectively.

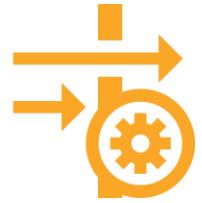## AREAS TO BE ADDRESSED:

HUMIDITY

TEMPERATURE

AIR PURIFICATION/ FILTERS

AIR PRESSURE & FRESH AIR CIRCULATION

TECHNOLOGY & AUTOMATION

- UVC
- HEPA+ Filters

(Source ISHRAE)

TACKLING THE SURFACE BORNE LOAD

Studies show that the COVID-19 virus can survive on surfaces for up to 5 days as mentioned in the table below.

Surface/Medium	Duration (Max.)
Most Metals (Excl. Brass)	5 days
Wood	4 days
Plastics	3 days
Stainless steel	3 days
Cardboard	24 hours
Aluminum	8 hours
Glass	5 days
Ceramics	5 days

AREAS TO BE ADDRESSED:

DISINFECTION

DE-DENSIFICATION OF AREAS

PERIODIC FUMIGATION

TECHNOLOGY & SMART GADGETS

- Auto Doors, Facial Recognition
- Contactless Systems – Elevators, Toilets

ADDRESSING THE BEHAVIORAL RISKS

CHANGING HABITS – THE NEW NORMAL

- Priorities Changing
- Social Distancing
- Hygiene
- Changing How We Interact
- Personal Protective Equipment (PPE)

RECALIBRATING POLICIES

- Security & Movement Control
- Guest, Employee, Contract Worker Policies
- Cafeteria & Food Safety
- Transport
- Recreational Facilities
- Mailroom & Storeroom
- E-Commerce Deliveries
- Fit-Outs
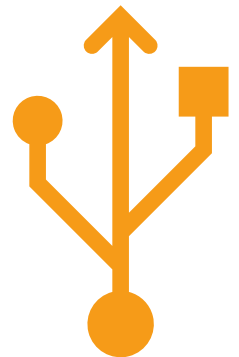- Domestic Help (Residential)

TECHNOLOGY & AUTOMATION

- Contact Tracing - Beacons
- Occupancy Monitoring using drones

LEVERAGING TECHNOLOGY

- Heating Ventilation & Air Conditioning
- Automatic Doors
- UV Technology – UVC Robots + HVAC
- Bluetooth Beacon Mapping – Contact Tracing
- Contactless Systems – Washrooms, Elevators, Visitor Management
- IoT Sensors
- Facial Recognition vs. Biometric
- Thermal Temperature Cameras & Door Frame Detectors
  - With Mask Recognition
- Smart Gadgets & Tools
  - Foot Door Handles
  - Sanitizer Foot Dispensers

OUR CONCLUSIONS

- **Communication is paramount**

- **Occupiers feel more secure if we tell them what is being done**

- **All stakeholders must be collectively responsible**

- **Health & Well Being will be prioritized**

- **Areas will be De-Densified**

- **We don't have all the answers yet, but continuous learning**