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Coronavirus COVID-19: Securing the workplace

April 1st, 2020
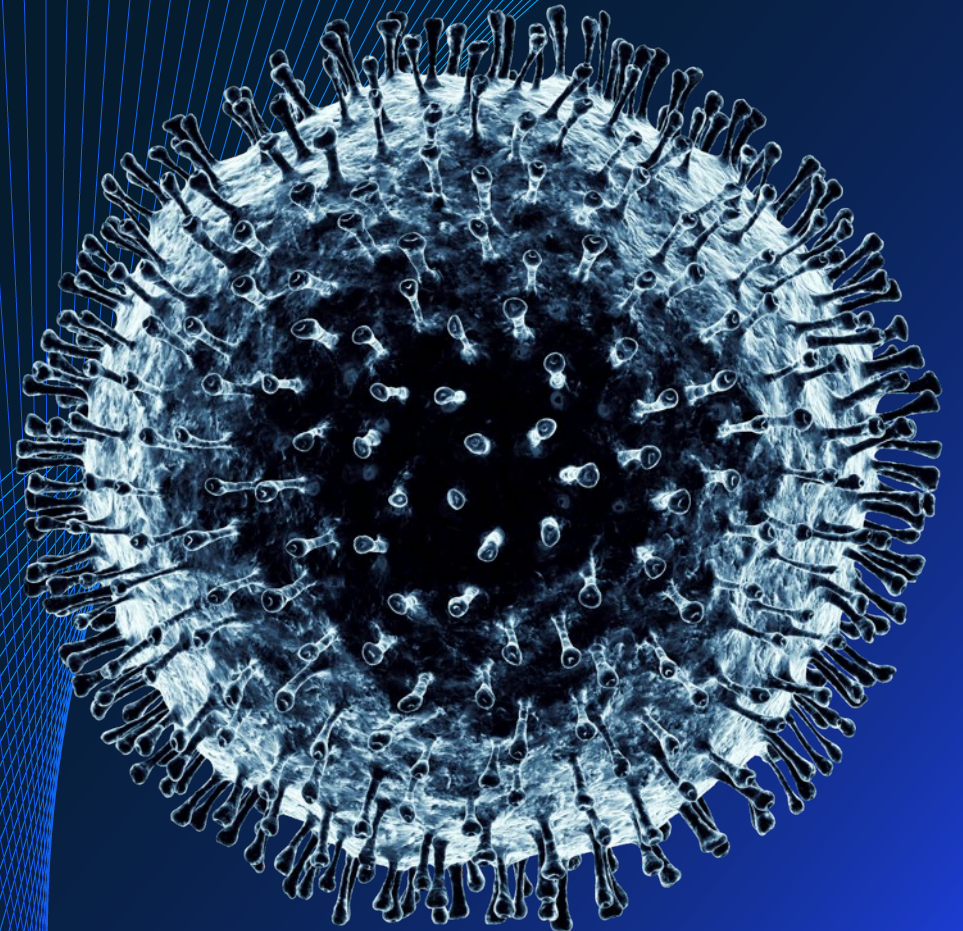
Context and objectives

Independent of the status in the broader society once the economy starts to open up, securing the work place will be a top priority

- Virus has been suppressed by lockdowns and testing – critical to secure the workplace as majority will not be immune
- Virus is suppressed by herd immunity – large share of the working population will not be immune so risk of micro outbreaks

Securing the workplace entails both physical changes (e.g. physical separation, entrance checks, PPE, etc.) as well as behavioral changes (e.g. personal conduct, procedures and process, etc.)

We believe there are five dimensions that need to be in place in order to secure the work force

- **Separation**
  — **Space** (e.g. Social distancing built in, queue distancing)
  — **Time** (e.g. white colors two shift)

- **Testing/surveillance** (e.g. Entrance checks, testing capacity on site)

- **Personal health measures** (e.g. Health ID, PPE)

- **Policies and behaviors** (e.g. personal conduct)

- **Return to work trainings** (e.g. online trainings, information at site)

We are seeing safer solutions for safer working being applied and tested across companies

Examples – implemented and worked on

Dimensions for safe work

1 **Separation – Space and time**

2 **Control, Testing and Surveillance**

3 **Personal health measures**

4 **Worker Behavior and Policies**

5 **Return to Work Training**

Innovations and improvements to address worker safety and confidence in-and-around the workplace

A Re-modelling/Re-tooling the workspace
B Upgraded PPE for Viral Protection
C Improved Air Filtration and Ventilation
D More Touch-free Handles/Interfaces
E Temperature Measurement Upon Entry
F Contact Tracing
G Controlled Entry to Production Floor
H Hygiene Zones with Checkpoints Between
I Health ID and Employee Risk Categorization
J Work From Home Kit

K Visual Social-Distancing/Sanitization Cues
L Worker Proximity Sensors
M Hotspot Surfaces Market with Colour
N Clean Working Kits
O Highly Visible Workspace Cleaning
P Designated Team Guard
Q Staggered Shifts and Lunch Times
R Canteen Tables Spaced and Food Served Portioned in Re-usable Boxes

Warehouse

Production

Canteen

Office
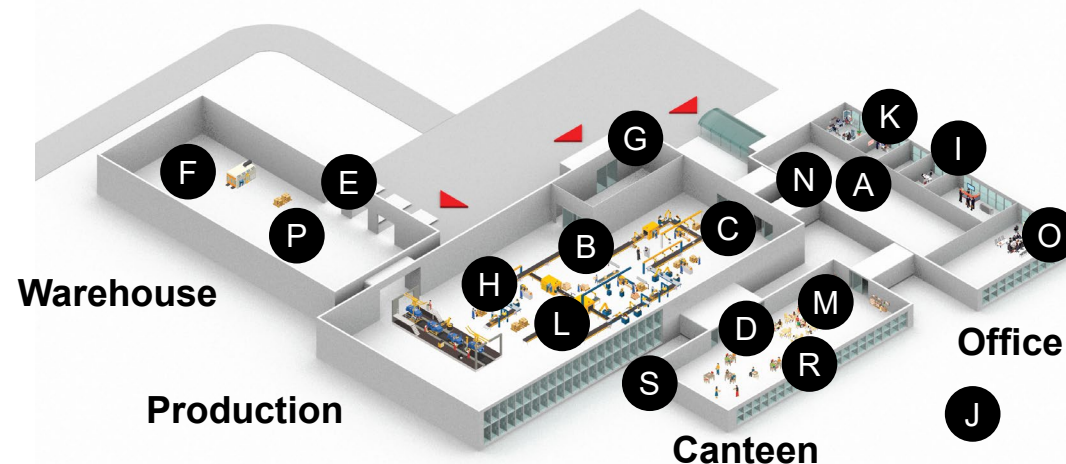
Illustrative Examples

D More Touch-free Handles/Interfaces

I Health ID and Employee Risk Categorization

K Visual Social-Distancing/ Sanitization Cues

Securing the workplace – concept examples

1 **Separation – Space and time**

- Re-modelling/Re-tooling the workspace
- Improved Air Filtration and Ventilation
- More Touch-free Handles/Interfaces
- Visual Social-Distancing/Sanitization Cues
- Canteen Tables Spaced and Food Served Portioned in Re-usable Boxes
- Staggered Shifts and Lunch Times

2 **Control, Testing and Surveillance**

- FLIR Camera Controlled Access to Site
- Controlled Entry to Production Floor
- Hygiene Zones with Checkpoints Between
- Highly Visible Workspace Cleaning

3 **Personal health measures**

- Health ID and Employee Risk Categorization (incl access control)
- RFID/Bluetooth Contact Tracing
- Worker Proximity Sensors
- Upgraded PPE for Viral Protection

4 **Worker Behavior and Policies**

- Behavioral policies
- Sick protocols
- Work From Home Kit
- Hotspot Surfaces Market with Color
- Clean Working Kits
- Designated Team Guard

5 **Return to Work Training**

- Printed Media Campaign
- Web Conference
- Online training
- Prominent Large Format Visual Displays Workplace
- VR Training

Suggested Approach

General Approach

- Joint ideation
- Co-creation
- Prioritization with workers

1

Separation – Space and time

- Floor plan review (physical or virtual)
- Conduct worker interviews
- Initial Ideation
- Virtual mockup creation
- Virtual walk-through with workers
- Simulation of workflows
- Final prioritization
- Remodeling
- Handover

2

Control, Testing and Surveillance

- Floor plan revision (physical or virtual)
- Policy Review
- Conduct worker interviews and survey
- Initial Ideation
- Concept evaluation and testing (iterate)
- Survey and final prioritization
- Rollout and change management

3

Personal health measures

- Review of PPE guidance
- Assessment of worker physical, cognitive understanding (what do I need to do) and emotional needs (how do I need to feel to perform)
- Implement pilot testing
- Rollout and management

4

Worker Behavior and Policies

- Review current policies
- Conduct interviews with workers
- Define the What: Behavioral policies, Sick protocols etc
- Define the How: assigning responsible persons, ongoing training, engage with the union

5

Return to Work Training

- Review current training methods (what works and what doesn't)
- Align on messaging
- Select appropriate groups for training
- Conduct pilot training and gather feedback
- Gradually update training programs

Governing thoughts

As the lock-down is over and the workforce starts to be reactivated - it is critical to secure that the virus does not start to spread again

Remodeling of work places, extensive testing, workplace entrance checks and policies will be needed to quickly find and isolate new out-breaks of the virus

Preparations should preferably be done during a lock down to be ready when people are released back into the workforce

Re-modeling/Re-tooling of the workplace
Ensuring greater spacing between employees/functions/cells

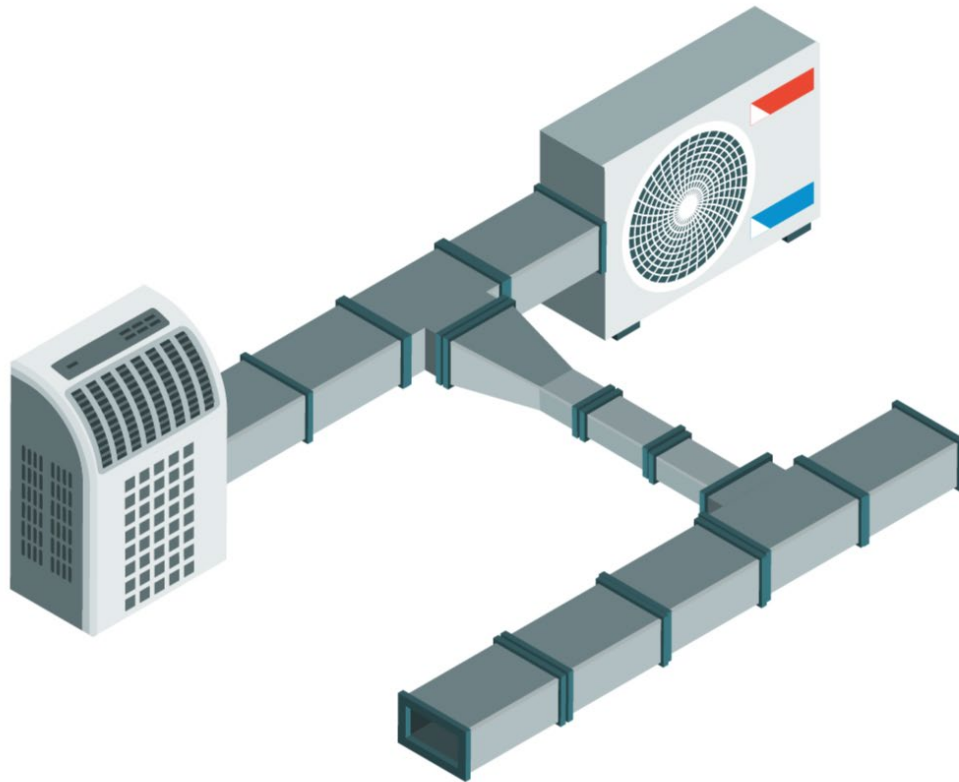**Concept Description**

Lines, offices and cells could be redesigned or re-tooled to provide for greater spacing between employees and reduce the risk of contamination between functions.

Impact

- This may help to reduce the spread of any infection
- May also provide compartmentalisation of the organisation in the event of a wider spread allowing the maintenance of some company functions.

Improved Air Filtration & Ventilation

More efficient removal of hazardous particles from the environment

Concept Description

Workplace ventilation and filtration could be improved to reduce any hazardous particles which may be airborne.

Impact

- Reduces the concentration of airborne viral or bacterial particles which may help to reduce the likelihood of worker infection

More Touch-free Handles/Interfaces
Fewer handles and physical interfaces and introduce motion control

Concept Description
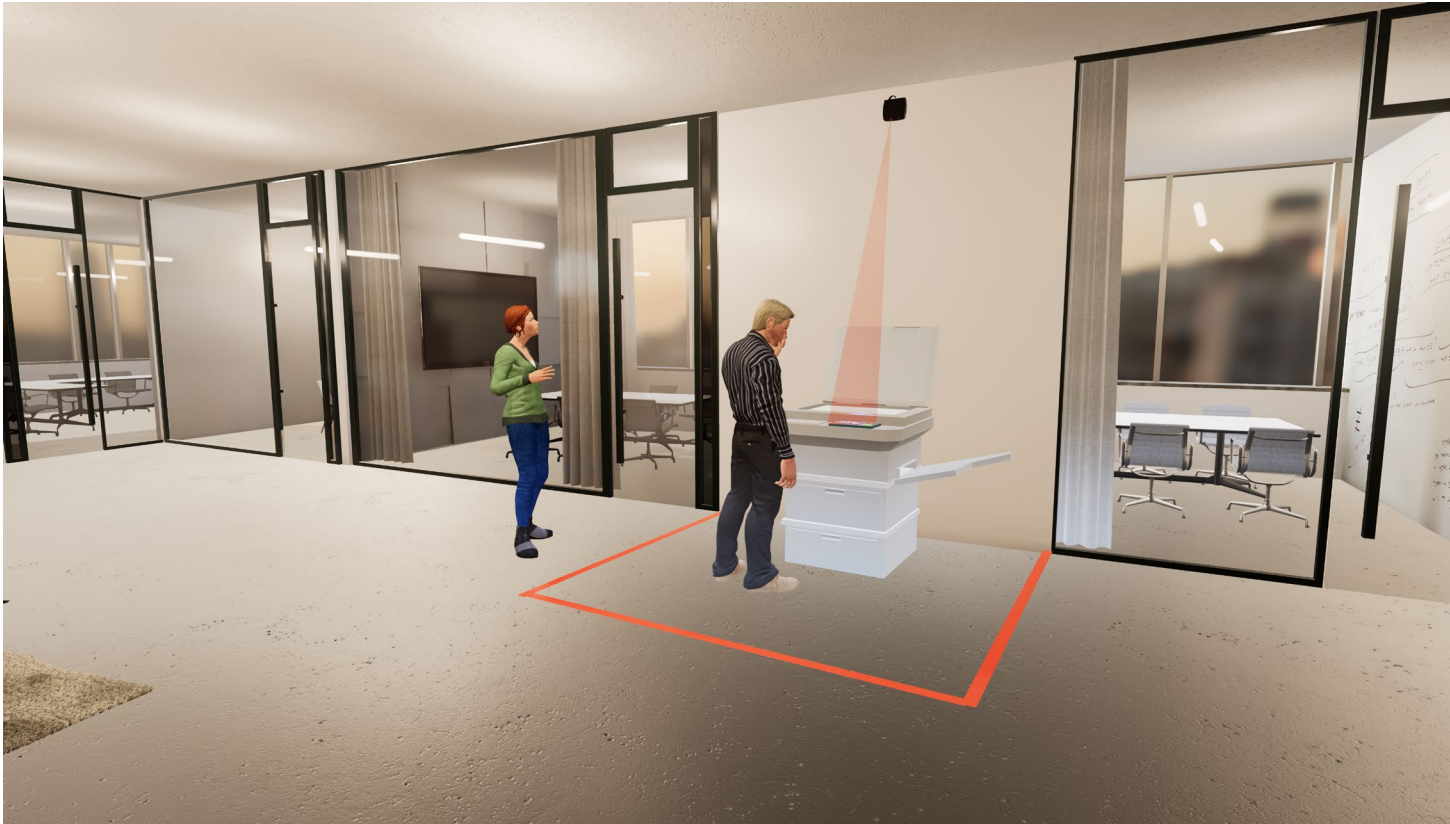
Greater use of motion-control or touchless doors and interfaces throughout the workspace.

Impact

- Reduces the risk of workers contacting a contaminated surface.

- Could help to reduce the cleaning requirement

Visual Social-distancing/Sanitization Cues

Providing quick checks/reminders to maintain distancing and hygeine

Concept Description

Visual cues such as markings or projections on the floors, walls and interfaces could indicate to workers of safe distances and provide reminders as to when they should change PPE or wash their hands as the go through the working environment.

Impact

- May Increases the frequency with which employees wash their hands

- Increases employee awareness of their hygiene

Staggered Shifts and Lunch Times

Employee shifts and breaks are staggered to prevent queues and crowds

SHEDULE

Group 1 — 8:00 | 11:00 - 11:45 | 16:00

Group 2 — 9:00 | 12:00 - 12:45 | 17:00

Group 3 — 10:00 | 13:00 - 13:45 | 18:00

Groups switching shifts every week.

● short break   ▬ lunch break

Concept Description

Work shifts and breaks could be staggered by 30/60 minutes.

Impact

- Helps to reduce queues and crowds, especially relevant if screening measures are introduced requiring more time to pass through.

- Makes it easier for workers to maintain social distance.

Source/Supporting Rationale: American Centre for Disease Control – "Implementation of Mitigation Strategies for Communities with Local COVID-19 Transmission"
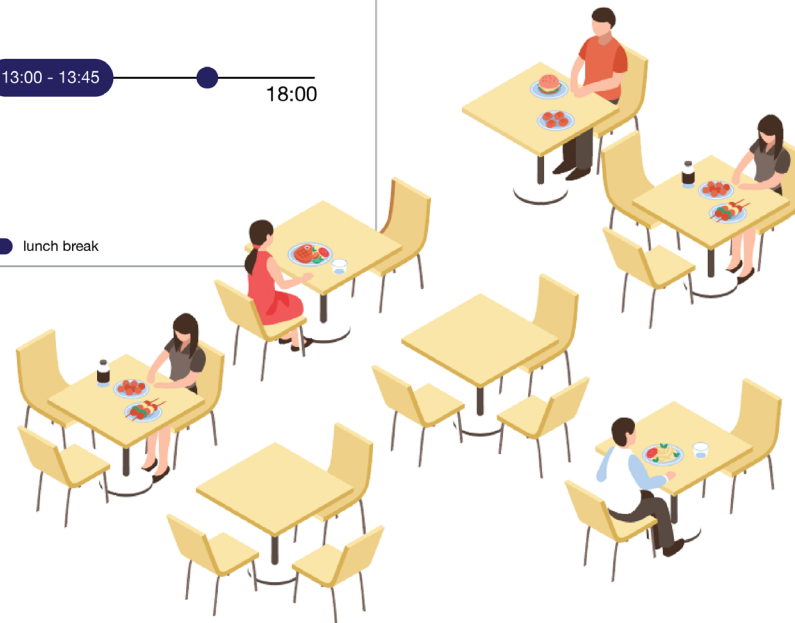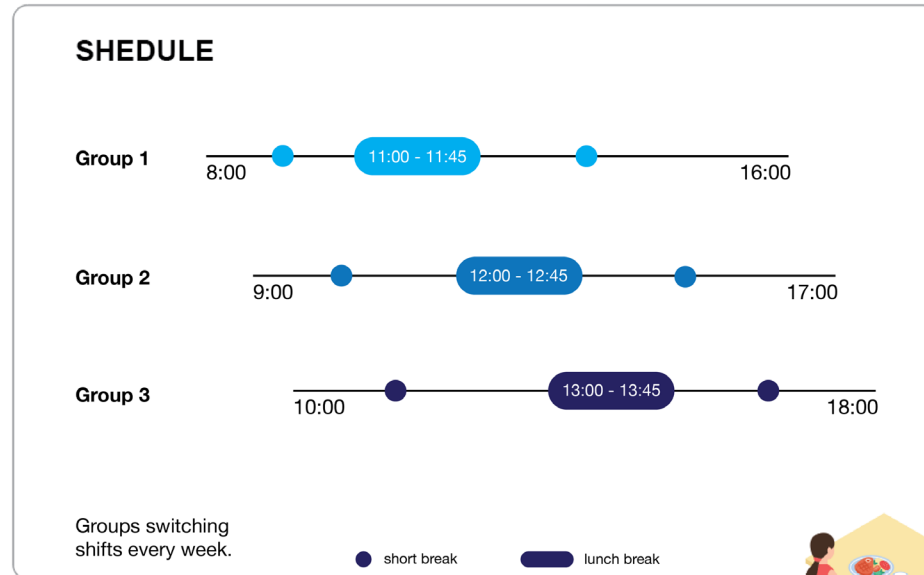
Canteen Tables Spaced and Food Served Portioned in Re-usable Boxes

Serving pre-packed food in re-usable boxes

01 Canteen tables spaced
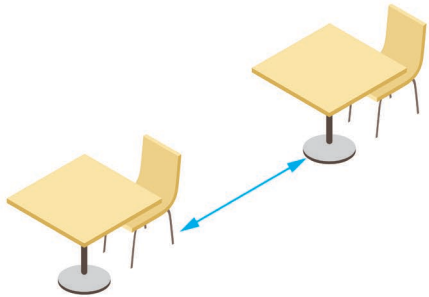
02 Pre-portioned re-usable boxes

03 Food trucks in summer season
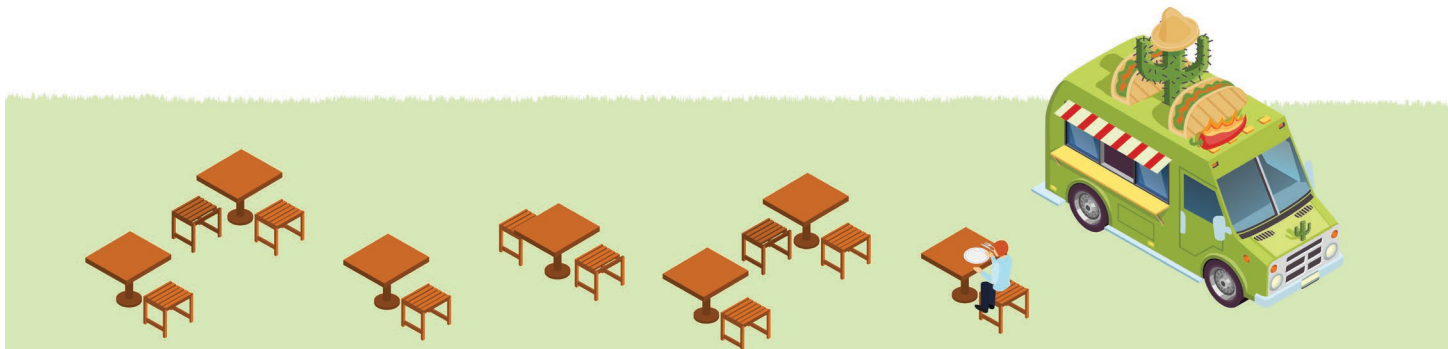
Concept Description

Removal of self-service style lunches from the canteen and replaced with catered, portioned food in re-usable boxes. This could take the form of food trucks during summer months to get the workforce into clean air.

Canteen tables could ensure spacing between employees so no-one sits directly beside or in front of the worker. (Checkerboard arrangement)

Impact

- May help to reduce queues and physical contact between workers

Temperature Measurement upon Entry

Greater screening of employees prior to entering workplace

Concept Description

Before entering the workplace, employees would face short, automated screening process using FLIR cameras or contactless thermometers.

Impact

- This would provide an additional level of security for the workplace
- Helps to disincentivise workers coming in to work even when sick.

Source/Supporting Rationale: American Centre for Disease Control – "Implementation of Mitigation Strategies for Communities with Local COVID-19 Transmission"

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Controlled Entry to Production Floor

The production floor becomes a controlled clean-space with "airlock" access

Concept Description

The entire production floor could become a controlled clean-space, with access only through an "airlock" area where workers must sanitize, check temperatures and don appropriate PPE.

Impact

- This could help to ensure that everyone entering the production floor is healthy and protected.

- Increases worker confidence that they are in a safe and hygienic environment

Inspiration/Supporting Rationale: Techcrunch "General Motors spins up global supply chain to make 50,000 face masks a day"

Hygiene Zones with Checkpoints Between

Workspace separated into zones with mandatory sanitization between each
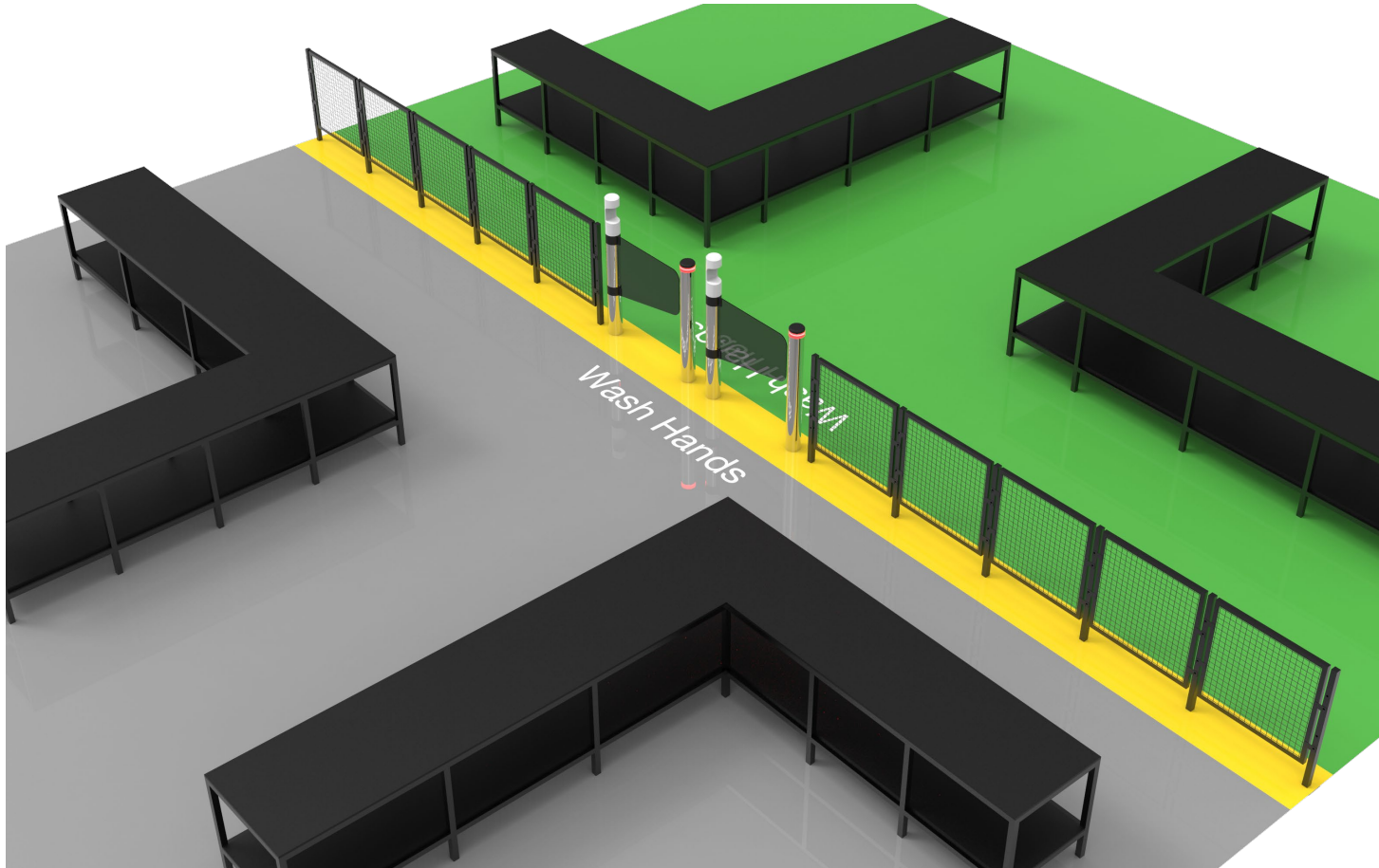
Concept Description

The workplace could be separated into various zones with mandatory sanitization between each and recording of who is moving between each zone.

Impact

- Increases the frequency with which workers must wash hands/change PPE.

- Provides an indicator of which zones are most at risk of infection and enables contact tracing

Source/Supporting Rationale: American Centre for Disease Control – "Implementation of Mitigation Strategies for Communities with Local COVID-19 Transmission"

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Health ID and Employee Risk Categorization
Worker self assessment leading to risk category
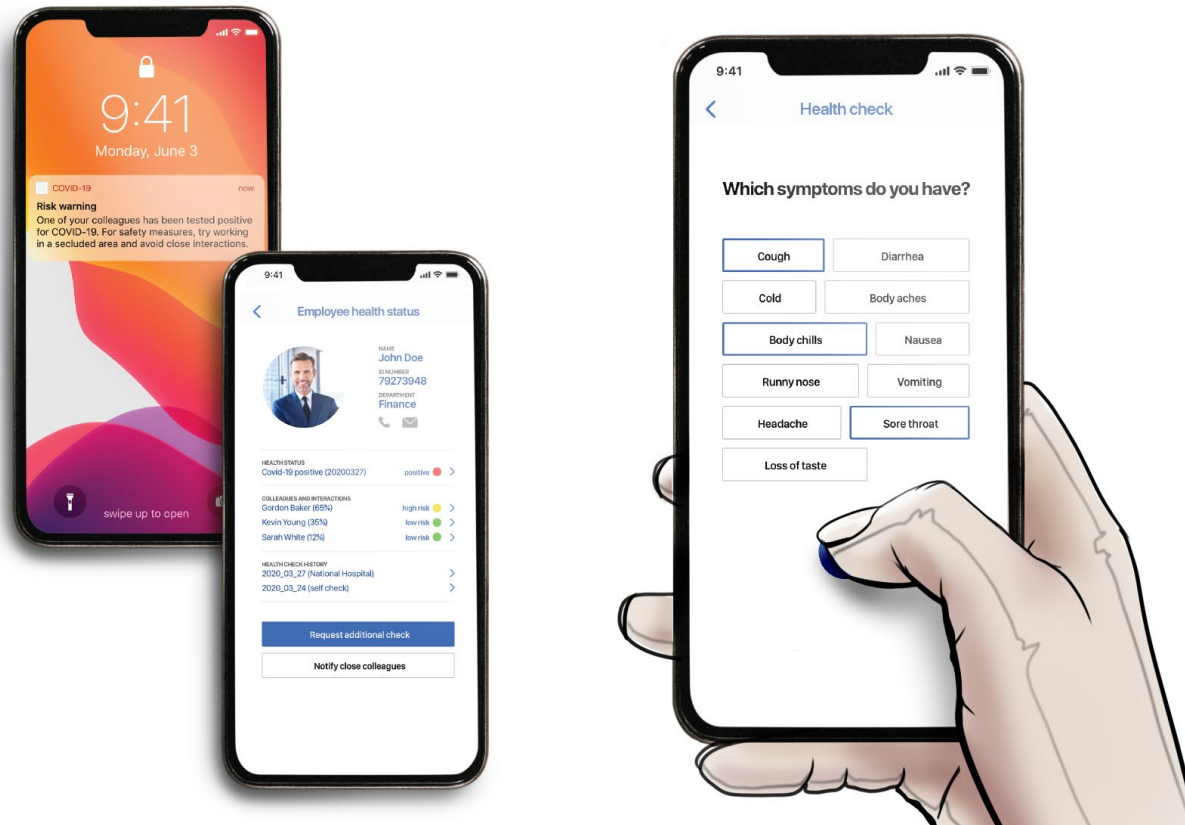
Concept Description

The Health ID app could form the basis of a worker-safety ecosystem. The app would require a short daily self-assessment asking questions around symptoms and family contacts which would lead to a daily Employee Risk Categorization.

Impact

- Using this risk categorization, workers could be given personal instructions such as "work from home", "work only in certain areas" and "complete access".

Source/Supporting Rationale: https://www.gov.sg/article/help-speed-up-contact-tracing-with-tracetogether
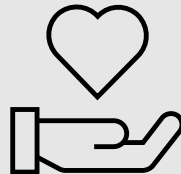
"Health-ID"

A trusted platform securely connecting proven identities with verified COVID-19 status

Linking trusted sources of health (e.g. government data and apps, third-party input) **with a global and secure identity**, proving health status (incl. immunity) across borders and use cases

Trusted identity verification for individuals at the work-site
- Own employees
- External suppliers, consultants
- Maintenance & repair field service crews

Trusted health status tracking for individuals, incl. 3rd party sources
- Self-reported symptoms, travel history, and wearables data
- Link to national COVID-19 status apps
- Testing data (once available)
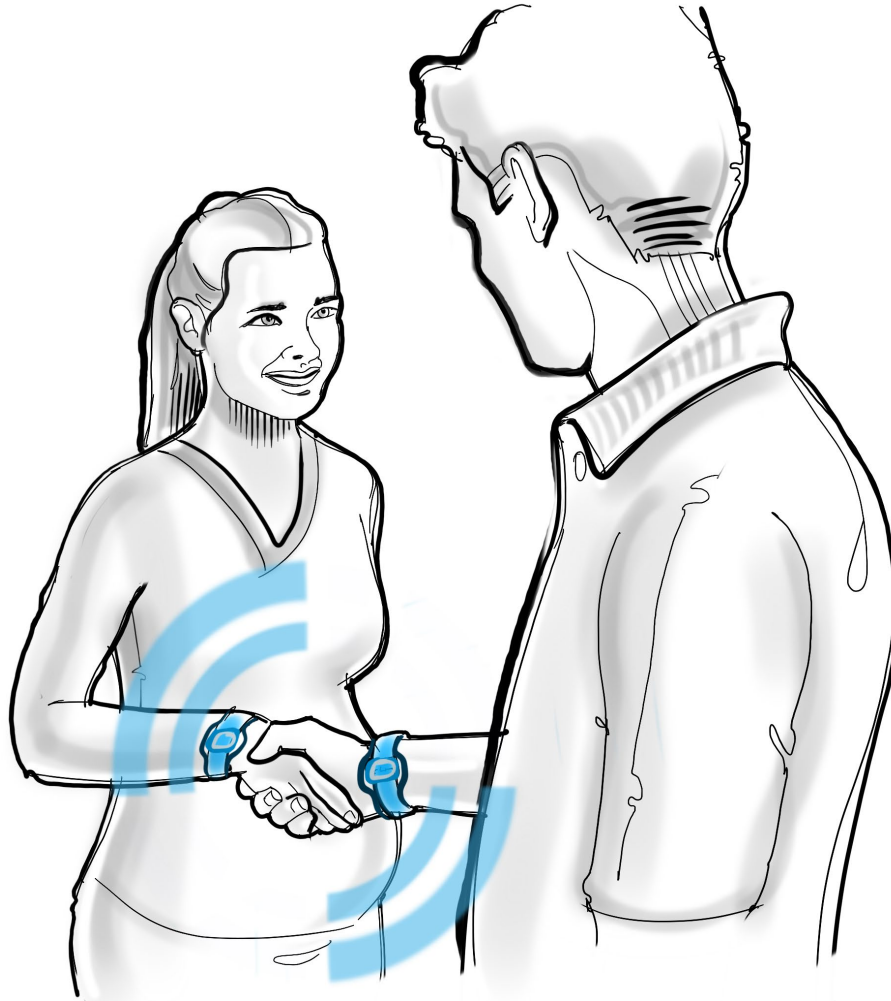- Secure and trusted data handling

Access control linked to COVID-19 health status
- Physical access granted for safe individuals
- Instantly deployable with two smartphones

Worker Proximity Sensors

Provides vibration alert when too close to another worker or high risk area

Concept Description

This proximity sensor could take the form of an app on a company phone or a physical tag that the worker can clip onto their PPE. It could provide a vibration or light as a reminder when they get too close to another worker or high risk area. It may also vibrate as a reminder to wash hands or to work area.

Impact

- Increases employee awareness of proximity to others and workplace hygiene

Source/Supporting Rationale: https://www.gov.sg/article/help-speed-up-contact-tracing-with-tracetogether

Upgraded PPE for Viral Protection
Including anti-viral/bacterial function in current PPE equipment
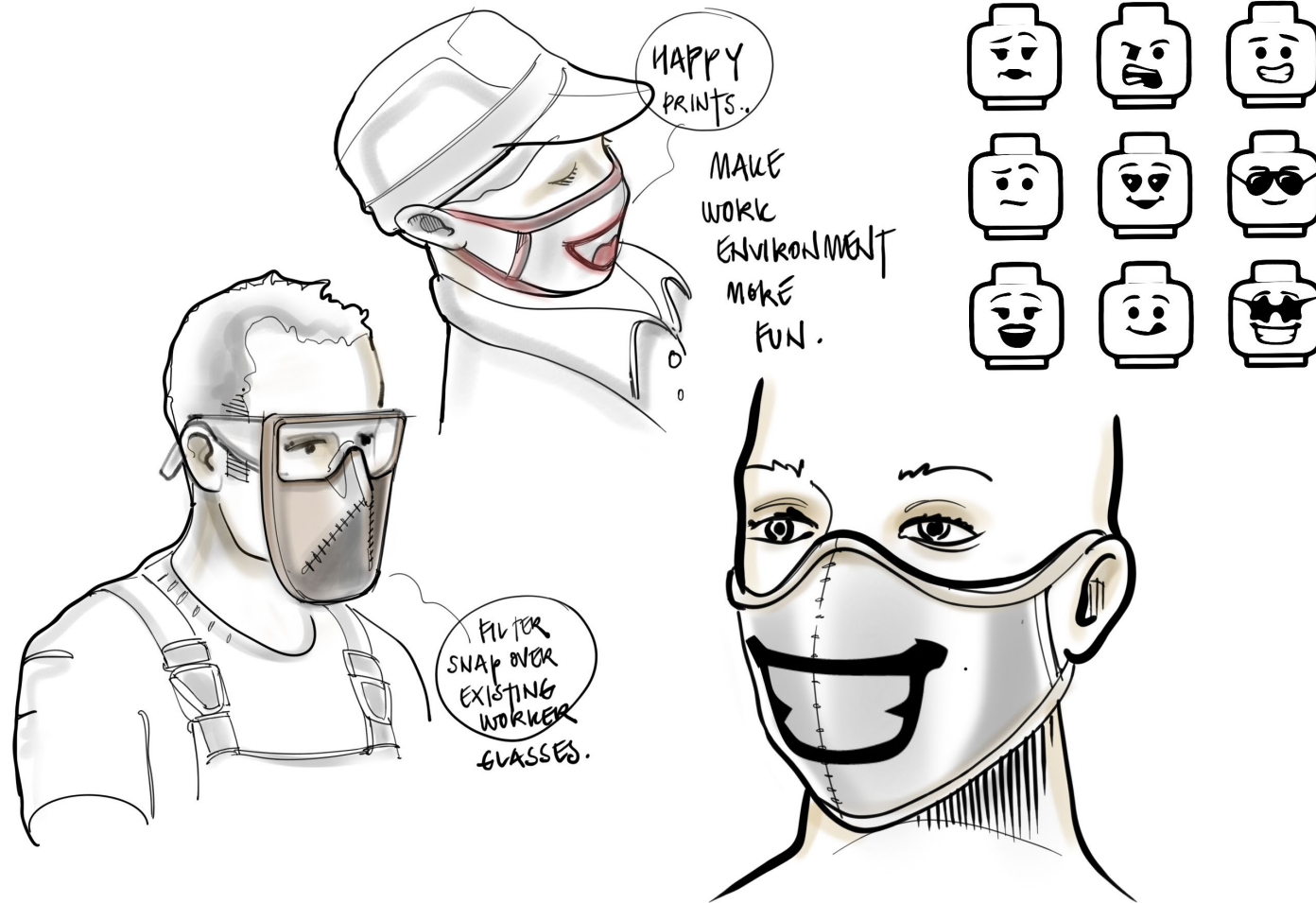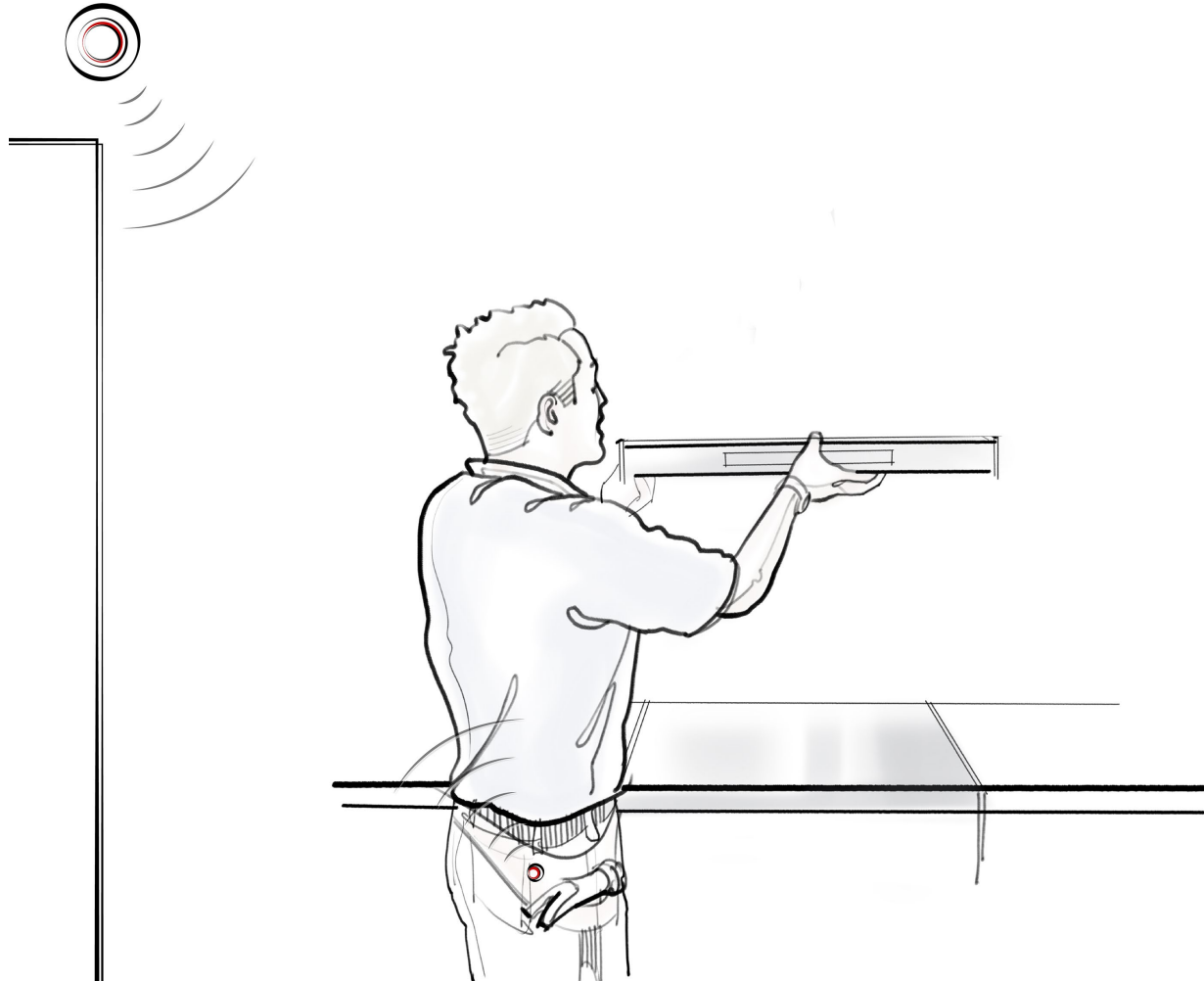
Concept Description

Current PPE provides adequate protection for current workplace risks however this could be upgraded to provide increased protection against viral or bacterial infection. This may take the form of disposable plastic sleeves and visors, or reusable anti-microbial base-layers and masks.

Impact

- Improves worker protection against viral and bacterial contamination

Contact Tracing

Using beacons to generate data on worker contacts and high-risk areas/cells

Concept Description

Each worker would be issued with a small, clip-on RFID or Bluetooth beacon which would gather location data throughout the day.

Impact

- This data could be used to conduct contact tracing in the workplace
- Could assist with prioritising cleaning
- Helps to identify hotspots where employees cluster which may assist with workplace re-design.

Highly Visible Workspace Cleaning

Confirmation of cleaning is displayed confirming cleanliness of workspace

LAST CLEANED

	6am	10am	1pm	3pm
2020 04 03				
2020 04 04	Joana A.	Joana A.	Martin P.	Martin P.
2020 04 05	Izabel			
2020 04 06				
2020 04 07				
2020 04 08				

Concept Description

Cleaners should update a 'confirmation of cleaning' list or display in a highly prominent location upon completion of cleaning.

Impact

- Instils confidence in workers that the workspace is clean and well maintained.

Work From Home Kit

## Enabling better working from home with a pre-packaged kit

Concept Description

Employees could be provided with "Work From Home Kits". This kit could include items such as remote WiFi devices, battery packs and FAQ guides.

Impact

- This could help to ensure workers are set up in the best possible way for productive working from home.

Hotspot Surfaces Marked with Colour
Frequently contacted surfaces highlighted and prioritized for cleaning
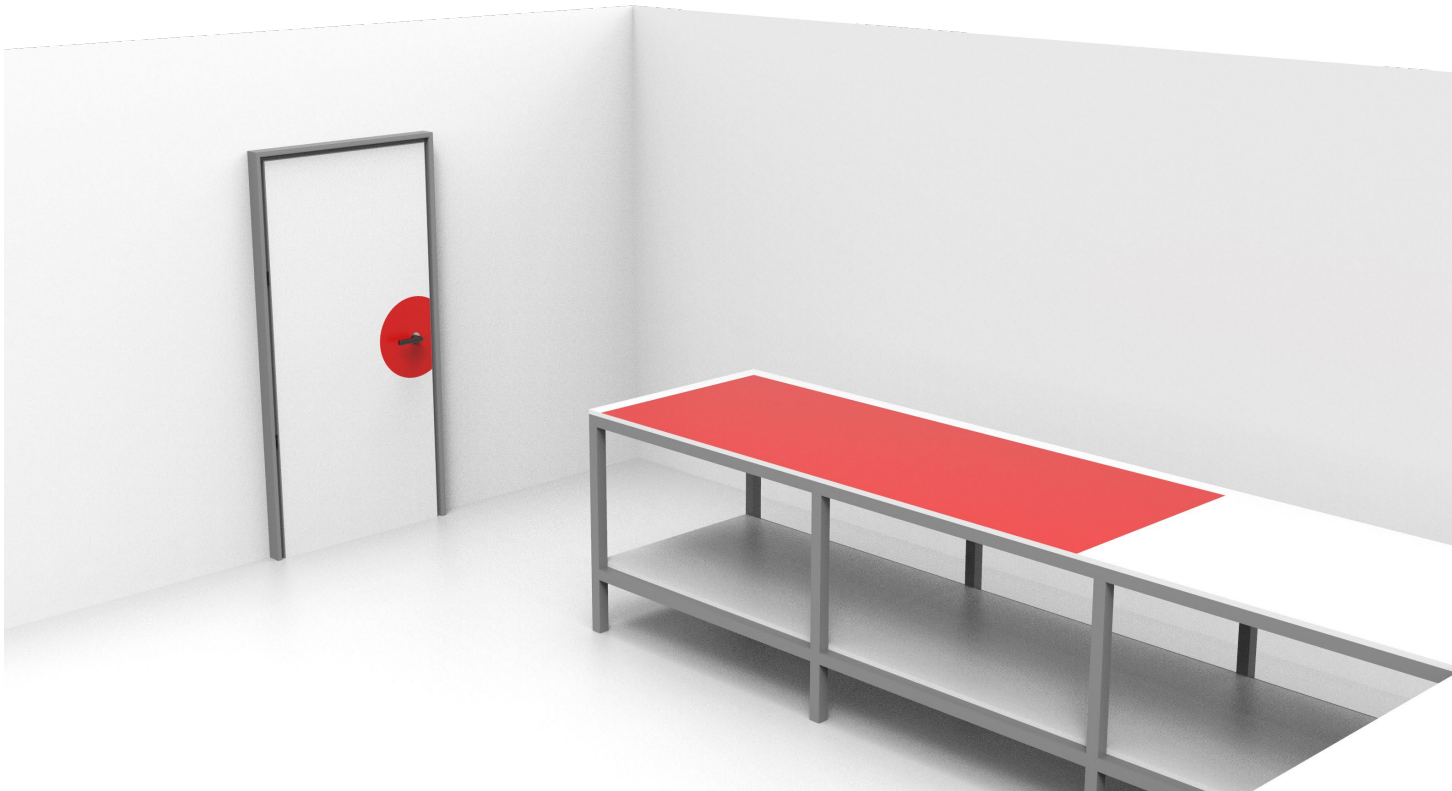
Concept Description

Surfaces that are frequently contacted by workers could be brightly colour-coded as a reminder to cleaning staff to ensure they are effectively sterilized and a visual cue to workers to wash hand or change PPE.

Impact

- Increases employee awareness of surface contact and hygiene
- Provides greater direction to cleaning staff

Clean Working Kits

Each employee has a personal kit of cleaning essentials i.e. alcogel, wipes…

Concept Description

Each employee could be issued with a personal "Clean Working Kit" which would include items such as alcogel, sanitary wipes and PPE disposal bags.

Impact

- This could help to ensure each employee has the tools they need to maintain good personal and workplace hygiene.

Designated Team Guard

A team member who ensures new standards are being followed

Concept Description

To ensure any new hygiene standards are maintained and to provide workers with a voice in maintaining these standards, a Team Guard could be appointed.

Impact

- This Team Guard would be responsible for ensuring their team have what they need in terms of knowledge and equipment to maintain personal and workplace hygiene.

Printed Media Campaign

An information and learning campaign comprising printed info packs

Concept Description

Leveraging printed media to inform employees about the changes they can expect when returning to work.

Impact

- Transparency and clarity about current situation and the way that it is handled
- Increased mental and emotional preparedness of staff upon return to work

Web Conferences (Pre-Return)

A series of web conferences to keep workers informed throughout process

Concept Description

Gathering employee groups to video conferences where they can get the latest information from their employer. Allowing questions and concerns to be raised prior or during the call.

Impact

- Keeps everyone up to date
- Enforces transparency and trust within organisation

Online Trainings (Pre and Post Return)

Online learning courses providing latest info. to prepare workers for return

Concept Description

These online training sessions may forma part of a larger series preparing the worker to return to the site. Beginning in their home and continuing for a time after return

Impact

- Can be deployed in the workers home pre-return or on-site post-return
- Can be tailored to match workers preferred learning style
- Can be gamified to provide learning incentives
- Can provide continuity across the pre and post return horizon

Large Format Visual Displays in Workplace

Prominent displays highlighting new processes, policies, tools and layouts

Concept Description

Large format posters or digital displays providing prominent, frequent reminders to employees of the new workplace situation and (crucially) the rationale behind it.

Impact

- Large format should make the messaging "unmissable"

- Simple messaging delivered in an highly accessible way

- Can be deployed standalone or part of a wider messaging strategy

VR Training

Immersive training programs to familiarize workers with new situation

Concept Description

To provide deep experience and modelling of new layouts or processes VR may be deployed for training.

Impact

- Allows practicing of dangerous activities or rare or emergency situations—which cannot easily be replicated in real world
- Gamified learning paths and scoring creates learning incentive
- Reduced costs – Save money on reduced down time, travel costs and less frequent real incidents.

Source/Supporting Rationale: