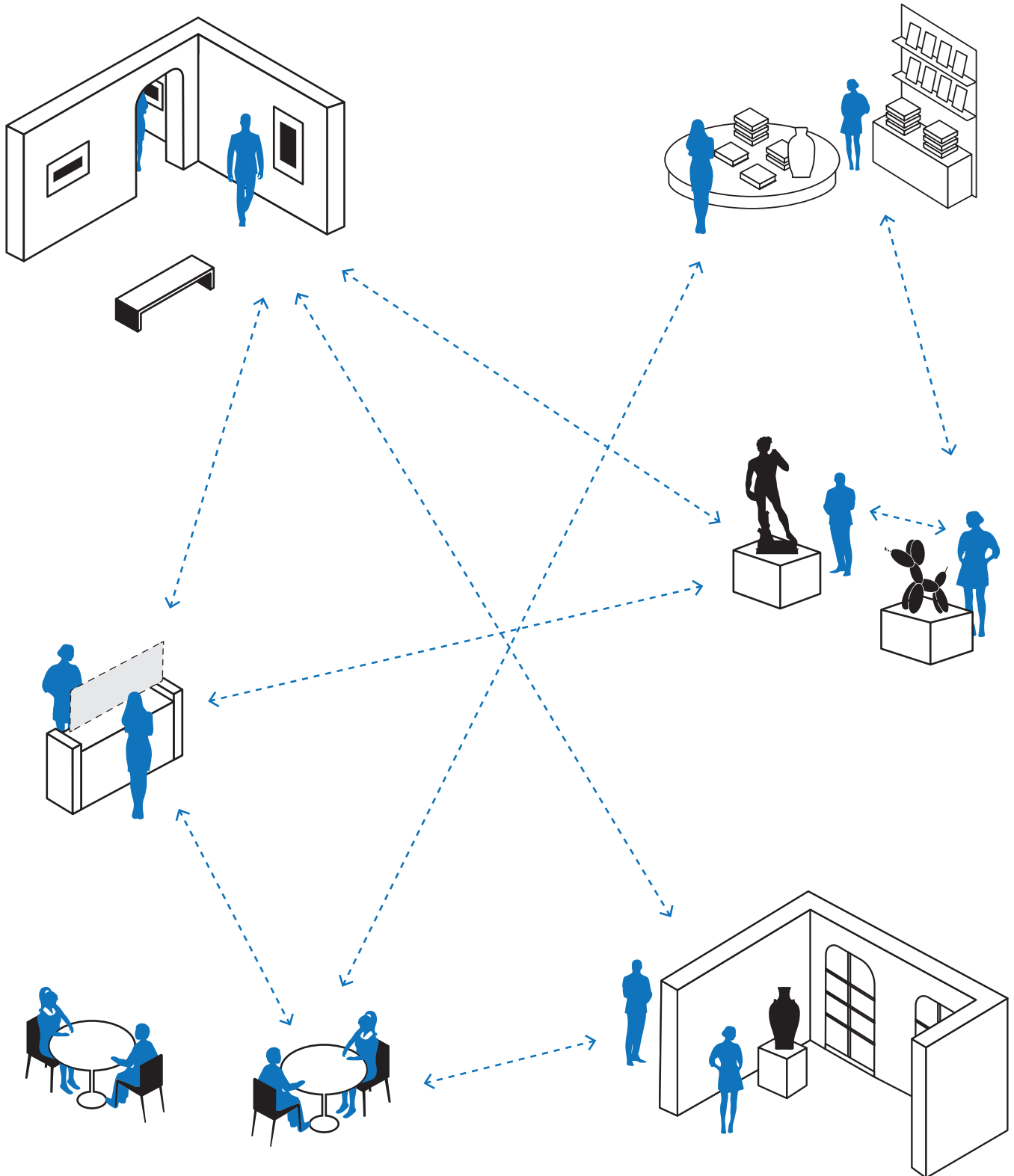


Museums in Times of Social Distancing

Spatial Toolkit



Introduction

We all, both as an individual and as organisations, live and operate in highly uncertain times due to COVID-19. A lot of what we know and do is increasingly being questioned and no firm solutions or end dates are given for the current circumstances.

Notwithstanding this challenging situation, we felt the need to use our expertise in spatial design for art related spaces, to explore and identify solutions and possibilities to help shape a new generic spatial design vision for museums within the given boundaries of social distancing as we know them to date.

This document is a practical and spatial translation of existing guidelines from industry related organisations such as CIMAM and the Dutch Museums Association, international governmental guidelines and restrictions, implemented and evaluated solutions and findings from museums, galleries and restaurants from regions that have already opened up and online research.

Our toolkit is by no means a 'one size fits all' solution but is meant to trigger alternative thinking with regards to finding solutions for spatial challenges related to social distancing. It can also be used as a toolkit from which museums can pick and choose what is relevant for them and further develop their own approach by making it location, site and situation specific.

Furthermore, we hope this document allows and challenges museums to look at the spatial interventions from an aesthetical point of view as well and realise they might be lasting longer than originally expected. And encourage them to develop and execute a well-designed plan that offers visitors an optimal visitor journey and places art at the core, without getting distracted by museum unworthy spatial interventions.

We believe this document could also support organisations in:

- Developing protocols to convince authorities
- Reassuring and convincing visitors to come
- Reassuring and convincing sponsors that the museum is taking adequate measures
- Making visitors and staff feel at ease
- Enabling visitors to move around easily and get to the desired destination
- Enabling visitors to focus on the art presented

Please note that this version of the document is recently developed. Knowing the coronavirus crisis is not stagnant, we will update the document available on our website on a regular basis and integrate new findings and insights. Therefore, it is not a static document, but a permanent work in progress.

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General

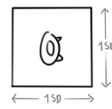
Occupancy

Distance

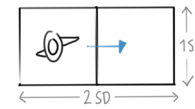
- Use advised national or local Social Distance of 1m (WHO, HK), 1,5m (EUR), 1,8m (USA) or 2m (CH) for all obvious situations, like desks, table set-ups, waiting lines etc.
- Anticipate an Intelligent Social Distancing approach for staff and visitors throughout the more free spaces in between.

Activities

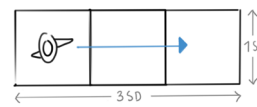
- Distinguish different basic activities of a person. From standing, walking, turning corners, watching art to meeting people.
- In times of Social Distancing (SD) we can indicate the occupied space by a person in terms of units SD. That results in 'running SD' compared to running meters/feet for length and width. And 'square SD' for the occupied surface compared to square meters/feet.
- For example the space taken for slow walking then coincides with 1 SD wide, 2 SD long and 2 SD².



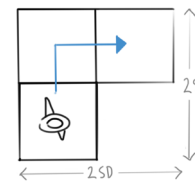
standing



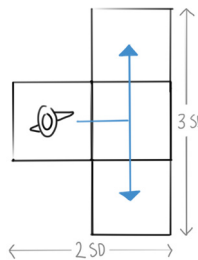
walking slow



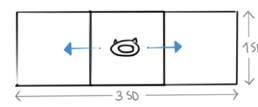
walking fast



overtaking









turning



watching art

- Matrix of potential activities:

Activities	Occupied Space per person in Social Distance of				
	1 SD	1,0 m	1,5 m	1,8 m	2,0 m
standing (queue) 	1 SD ²	2,3 m ²	2,3 m ²	3,2 m ²	4,0 m ²
standing (watching) 	3 SD ²	3,0 m ²	6,8 m ²	9,7 m ²	12,0 m ²
slow walking 	2 SD ²	2,0 m ²	4,5 m ²	6,5 m ²	8,0 m ²
fast walking 	3 SD ²	3,0 m ²	6,8 m ²	9,7 m ²	12,0 m ²
overtaking 	3 SD ²	3,0 m ²	6,8 m ²	9,7 m ²	12,0 m ²
turning 	4 SD ²	4,0 m ²	9,0 m ²	13,0 m ²	16,0 m ²

occupied space in m² per activity for different Social Distance

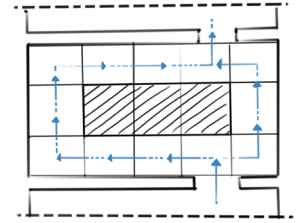
General

Defining occupancy

- Define occupancy on the actual activities of people on a show floor.
- For example consider: not used or central areas in exhibition rooms, transition areas, specific corners or shape of existing space that might affect the real occupancy and the distancing scheme.
- Local regulations can vary (i.e. NL 10m²/p.p and Austria 20m²/p.p, etc)

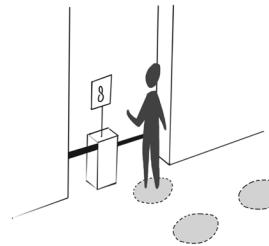


*theoretical occupancy
m²/p.p.*



*real occupancy of floorplan
with SD measures*

- New technology can help monitoring congestion and access, limit the amount of additional staff and assistants needed and help manage crowds and flows. And show the public which area are less crowded.
- Take into account the amount of staff already present when defining the max occupancy.
- Occupancy management per section is possible, but might need extra holding areas per section.



automatic access system

General

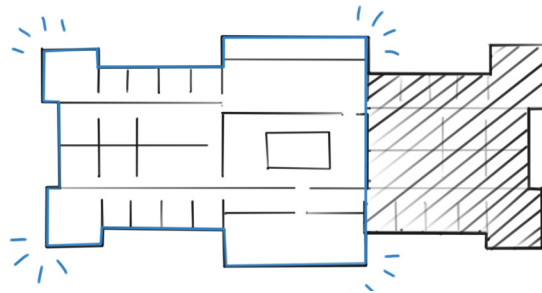
Floor plan

Reduce and reorganise the actual floor plan

- Several measures can be taken in order to reorganise the exhibition areas and their sections.

Reduce exhibition size

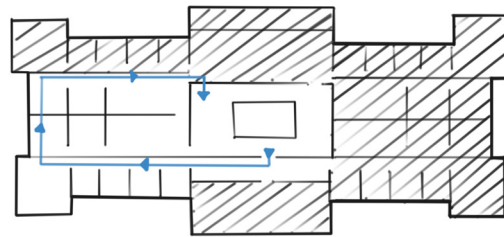
- In case of a big exhibition venue, consider to temporarily reduce the exhibition areas and/or sections, in order to simplify the management, reduce number of visitors and lighten the pressure on shared functions (entrance, cloakroom, queue and ticket desk, bar and restaurant).



portion of an exhibition floor plan

Limit visit to one section

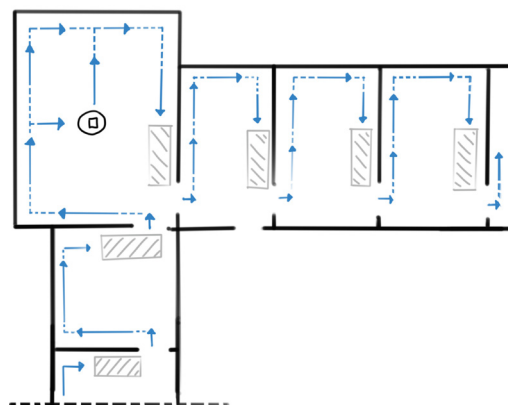
- A visitor interested in one section only would be able to visit it.



single section visit allowed

Balance sections

- Flow management per section and per room.
- Balanced occupancy.
- Guards with clickers, automatic counter at the entrance of each room, turnstiles, etc.
- Holding areas might be necessary per section, where people can wait before being admitted to the next section.

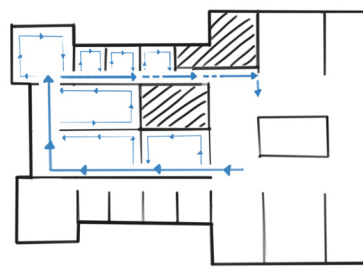


well balanced and managed occupancy between rooms and sections

General

Close rooms

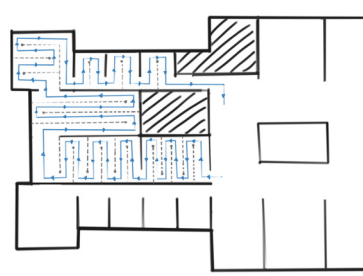
- Exhibition rooms that generate crossing flows can be temporarily closed.



closing of rooms with mixed flow

New partitions

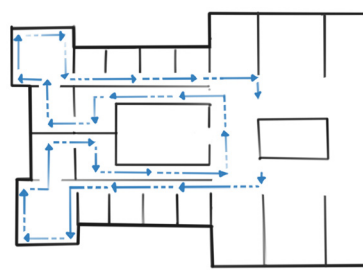
- Big exhibition rooms without a clear routing can be temporarily or semi-permanently reshaped in width and length with partitions and barriers and other design solutions.



management of a clear routing with modified layout

One-way

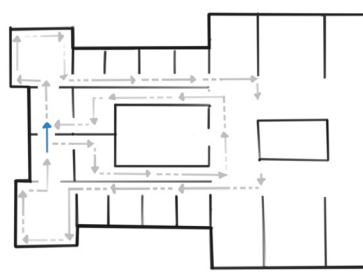
- Investigate the possibility of one-way routing for the whole exhibition or for certain sections.



one-way exhibition

One-way with shortcuts

- In case of big exhibitions combine some two way aisles, and enough shortcuts and loops for staff and/or visitors.
- Clear pattern with complete length and cross aisles in the same direction.
- The flow of visitors will be more steady and less chaotic.
- Repetitive use of directional floor signs at regular intervals in all aisles.



one-way exhibition with shortcuts

General

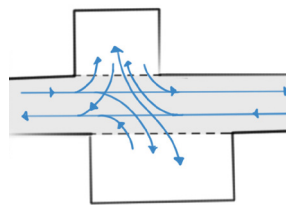
Flow: general parameters and support areas

Reorganise the actual flow

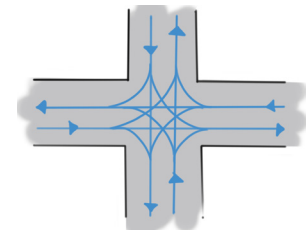
- Several measures can be taken in order to reorganise and optimise the flow inside the building.

Analysis of the actual flow and behaviour

- Investigate routing and flow of people in the actual floor plan. Look into behavioural patterns for people when lining up, walking, crossing, choosing, meeting and seating at specific places and destinations.



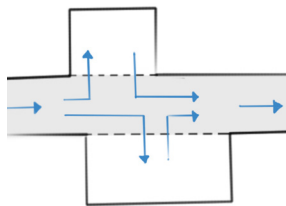
typical aisle with destinations



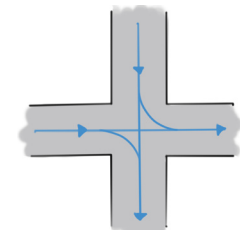
typical crossing

Separate flows

- New flow strategies and routing for all destinations.
- Simplify routes that generate mixed walking, changing of direction and crossing.

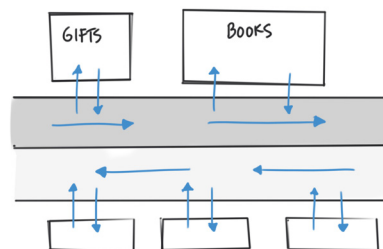


one-way aisle with destinations



one-way crossing

- Reorder mixed areas without crossing flow of people.

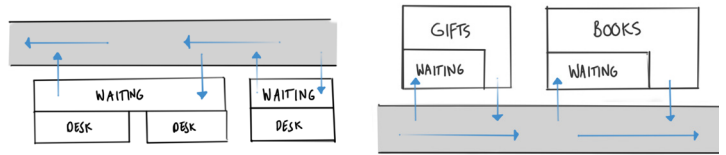


reorder mixed areas

- Group specific functions like desks for information, coat check and card pick up along a flow IN.
- Group specific functions like bookstores and gift shops along a flow OUT.

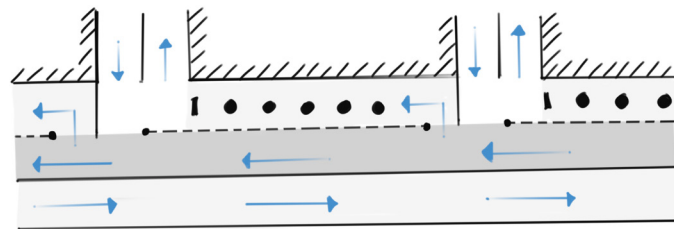
General

- Arrange for waiting area per specific functions and destinations, apart and away from the main flow.



waiting area per separate function and destination

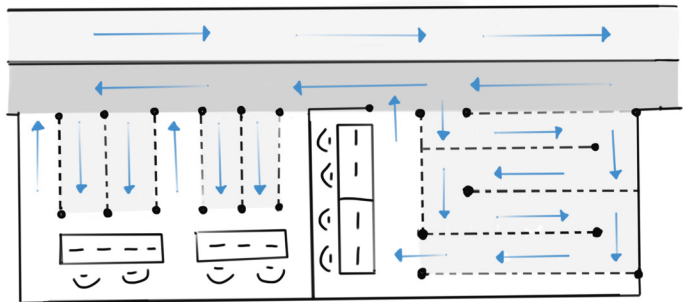
- Separate the flow of people that are walking, from the people that are lining up for a following entrance, hall or section.



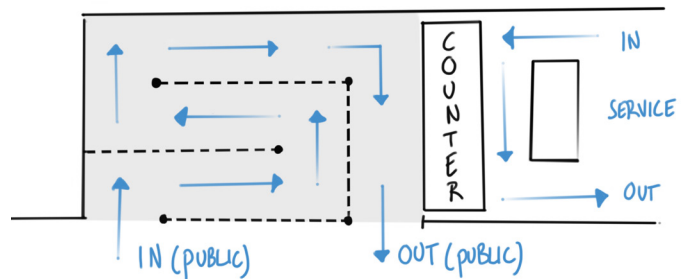
separate flow of people and waiting areas

Waiting & lining up

- Organise separate waiting areas per function and destination, each having their own lining up system.



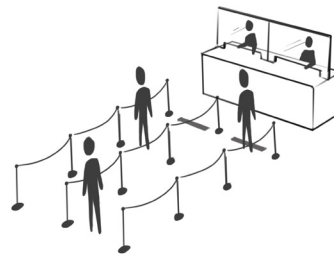
lining up system per desk or group of desks



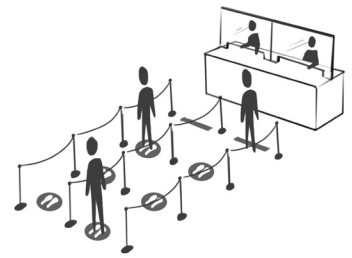
bar and restaurant: lining up system for takeaway

General

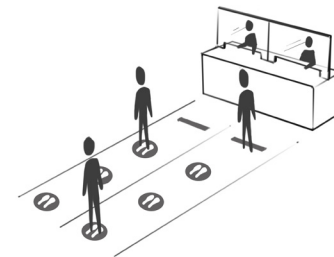
- Guiding elements for lining up; floor markers like lines, cross line for stop and dots and physical vertical markers like rope and stanchions.



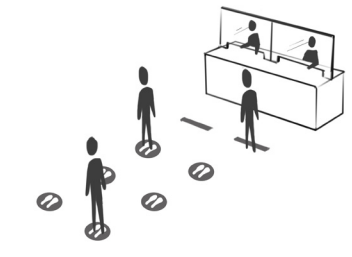
rope and stanchions plus stop



rope and stanchions plus dots and stop

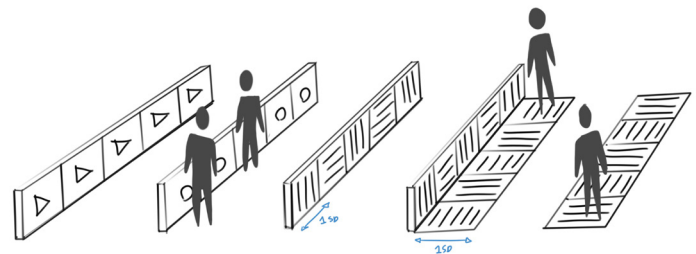


lines plus dots and stop



dots and stop

- Physical dividers like rope and stanchions.
 - Place the dividers elements at required Social Distance.
 - Lines and dots at required Social Distance.
-
- Fence elements with designed pattern at required Social Distance.

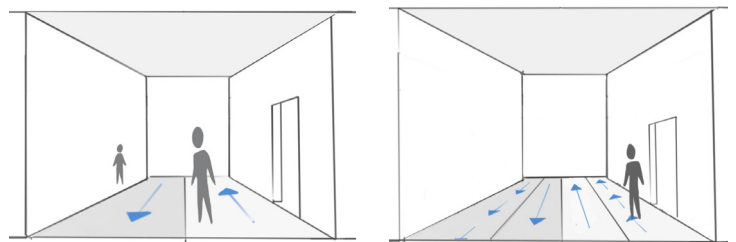


designed fence elements with SD pattern

General

Lanes

- Organise flow by lanes of different types, on show floor and in lobbies and on concourses.
- One-way and two-way lanes to divide oncoming flows.
- Slow lanes for slowing down, watching art and stopping. Fast lanes for overtaking and moving faster to a further destination.
- Indicate lanes by lines on the floor, carpet changes, printed carpet or special tape.



floor elements like lines and carpet changes for indication of lanes

- Encourage people to stay in their own lane and walk straight ahead.

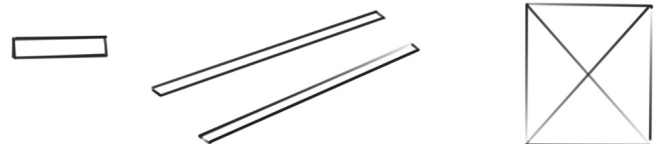
General

Floor markers

- Floor markers: a few simple and easy to understand Social Distancing symbols on the floor. Understandable from all sides.
- Feet-dot for standing and distance. A few feet-dots indicate the desired distance.
- Repetitive coloured dots indicate distance, line ups and lanes.
- A small cross line for stop and longer (double) lines for guiding flow and direction.

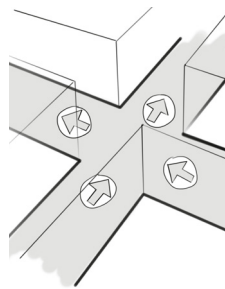


dots as floor markers

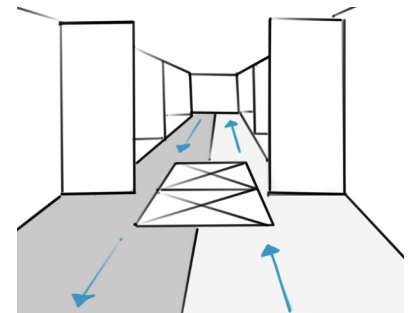


lines as floor markers

- Arrow-dot for walking and direction. More arrow-dots together indicate a one-way aisle or crossing.
- Non-stopping and non-seating places are indicated by a square and one or two diagonals.



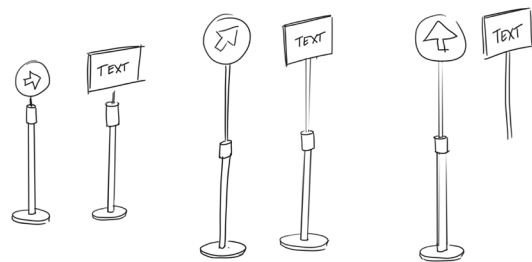
arrow-dots for one-way indication



diagonals in a square indicating area to be kept free

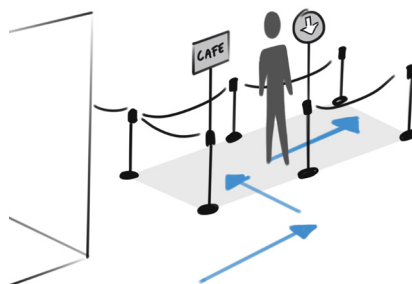
Vertical markers

- Vertical signs that communicate information about destinations and directions.
- Lower or higher attachments to standard stanchions. Or self-standing poles with symbol or text signs.



vertical signs for additional information

- Use clear IN and OUT symbol and text markers for separate destinations like Café and Restaurant and all types of desks.
- Indicate clearly along each lane where a specific area can be entered or where a specific line-up starts.



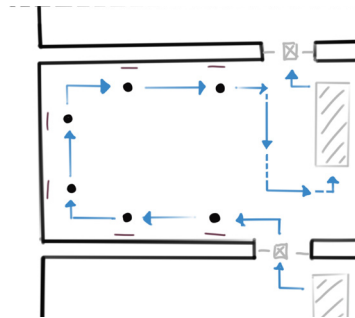
vertical signs for additional information

General

Flow: exhibition areas

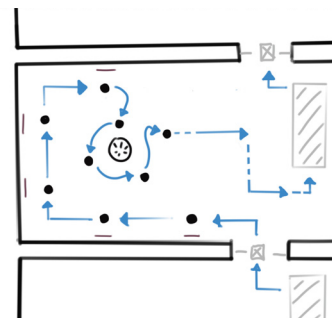
Flow with different art typologies and installations

- Art typology 1: 2D artworks on walls.
- Path on the perimeter of the room.
- Limit occupancy.
- Separate flow lanes from artwork viewing points or Stop & Go logic.
- Rearrange artworks considering SD.
- Holding area at the entrance when necessary. Manual or automatic turnstile to control balanced occupancy and max. number of visitors.



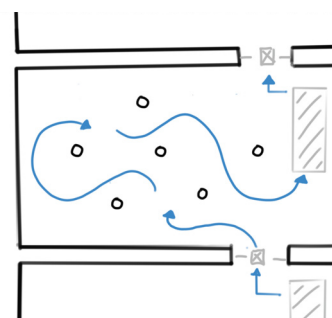
2D artworks on walls

- Art typology 2: 3D artworks and 2D artworks on walls.
- Path on the perimeter of the room when there are also 2D artworks on wall + organised flow around 3D artworks.
- Limit occupancy.
- Separate flow lanes from artwork viewing points or Stop & Go logic.
- Rearrange artworks considering SD if possible.
- Holding area at the entrance when necessary. Manual or automatic turnstile to control balanced occupancy and max. number of visitors.



3D artworks on walls

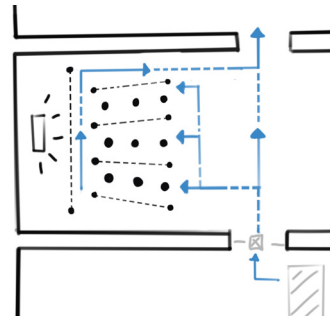
- Art typology 3: Spatial artworks (i.e. Richard Serra or Carlos Amorales).
- Free flow but limited number of visitors.
- Time slots or limited stay.
- Dedicated holding area at the entrance when necessary. Manual or automatic turnstile to control balanced occupancy and max. number of visitors.



Spatial artworks

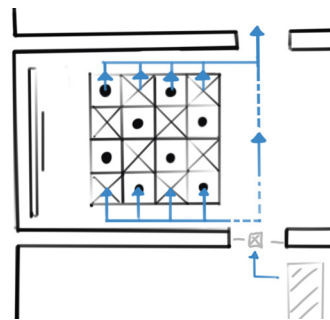
General

- Art typology 4: Mona Lisa artworks.
- High appeal and big crowd.
- Rearrange artwork position inside the room.
- Artwork viewpoint organised in grid or lanes.
- Time slots or limited stay.
- Dedicated holding area at the entrance.
Manual or automatic turnstile to control balanced occupancy and max. number of visitors.



Mona Lisa artworks

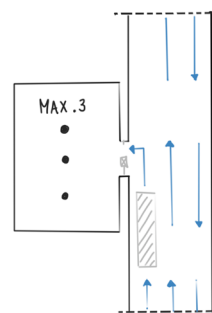
- Art typology 5: Audience seating in a room.
- Projection.
- Reading.
- Events with seated audience.
- Limited number of visitors / Time slots / Limited stay.
- Dedicated holding area at the entrance.
Manual or automatic turnstile to control balanced occupancy and max. number of visitors.



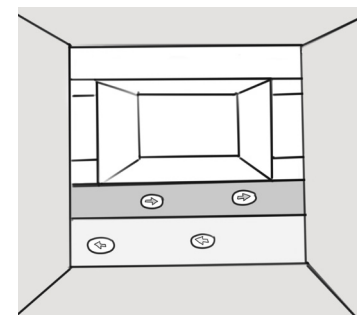
Audience seating in a room

Small rooms and artwork niches

- One-way strategy or limited number of people inside small exhibition rooms or niches.
- Artwork viewpoint separated by the flow lanes.
- Stepping back in the aisle from a small rooms the visitor recognises the direction by the flow of people and by the directional floor signs.



small room strategy

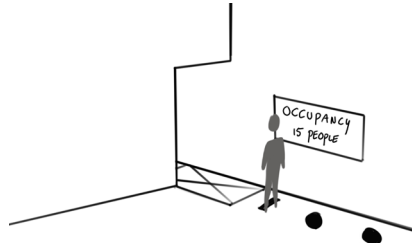


directional sign in aisle

General

Waiting inside exhibition areas: new holding areas

- Some exhibition rooms or parts of the room can be temporarily transformed into holding areas, especially when a limited number of visitors are allowed into the next room (spatial artworks, "Mona Lisa" artworks, etc).



Audience seating in a room

Transition areas

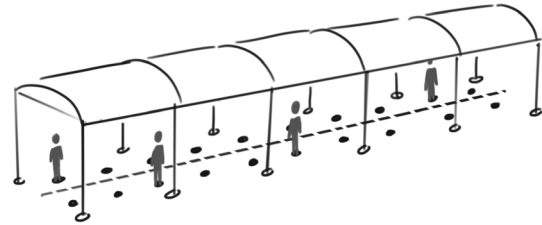
- No artworks along transition spaces (gates, doors, staircases, aisles): floor only. Especially during openings and events.

Functional

Before entering the building

Outside waiting area

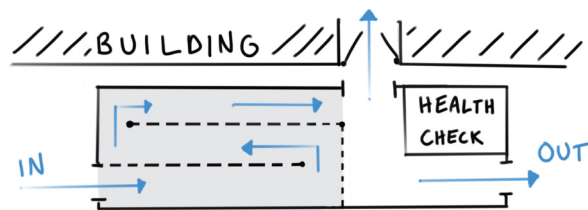
- A dedicated waiting zone (outside of the building) is needed.
- Indication by lines and symbols, by fences or a combination of both.
- Use signage for indicating the waiting time.
- Consider adding a tent, roof or other protection, temporary or permanent.
- Limit number of people with time slots and online booking.
- Possibly provide seats and support (water, sanitising gel, etc).



roof shade over waiting line outside

Health check unit

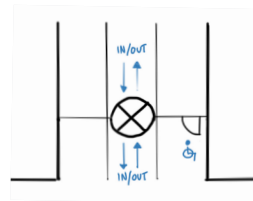
- If a health check is carried out, this is best done before visitors enter the show area or even before entering the building.
- If tested positive one can easily leave again.
- A health unit can be combined with other temporary relocated functions (see entrance show).



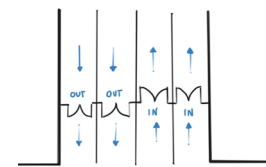
health unit added in front of the building

Door area

- Separate the IN and OUT.
- Use 2 sets of doors or use front and back doors for separate flows in and out.
- If possible, create extra entries/exits for visitors and for staff.
- Logical place to check your visitors for their online tickets or occupancy in general. If not allowed in (yet) one can still easily step aside.



actual entrance situation



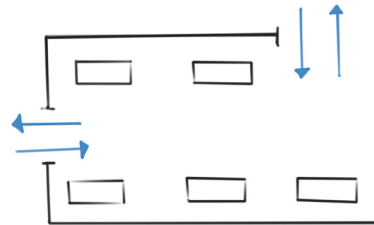
new entrance situation

Functional

Entrance

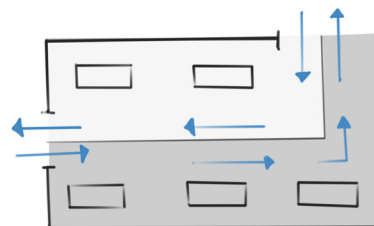
Area set-up

- An entrance area is often a mix of several functions placed together in a space before the exhibition.
- These can be ticket sales and pick up, card pick up, information, coat check, security check, lockers, bar and ticket check. And maybe a bookshop and gift shop as well.
- Separate and control flows.
- Regulate and limit the access to the entrance using time slots and a more comfortable queueing system.
- Avoid crossing by clarifying the route and using temporary designed partitions.



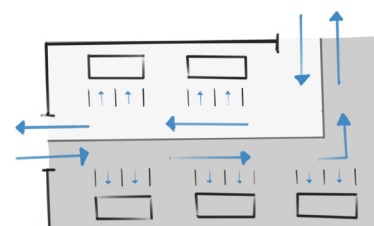
typical entrance area with several functions

- When less space is available a linear set-up of the area is possible.
- Visitors will pass by the different functions in a row, both for coming in and going out.
- People have to wait for each other.



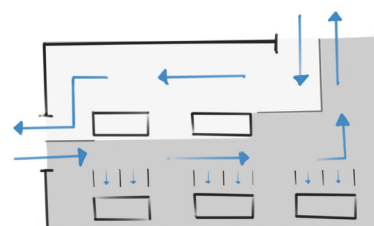
linear set-up along a flow in and a flow out

- When the space is big enough each function can have its own queuing line and waiting area while people can pass from behind in a separate lane.



multiple set-up with waiting lines per function and a pass by lane

- When the space can be reorganised it might be possible to use part as a multiple area.
- The multiple part has waiting lines per function.
- In the linear part people queue after each other for all functions in a row.

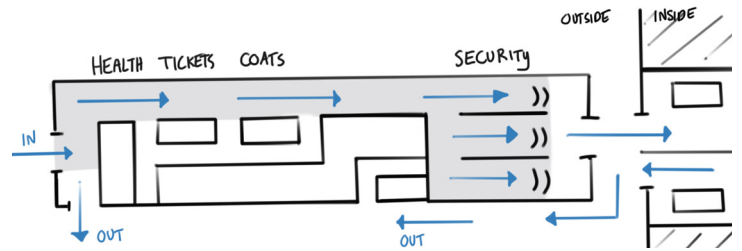


mixed set-up with partly waiting lines and partly linear

Functional

Relocate functions

- When the space is not optimal for separate lanes, flows and waiting areas other parts of the building might be temporarily useful.
- Relocating some functions outside in a tent might be a solution too.
- This can be combined with an outside health check.



outside tent or semi-permanent pavilion with additional functions in a linear set-up

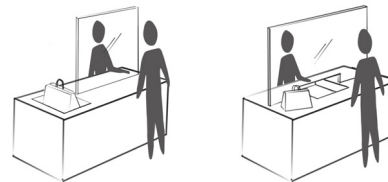
Desks

- Desks for information, card pick up, ticketing and coat check have protective shields and create enough distance with handout space between staff and visitors.



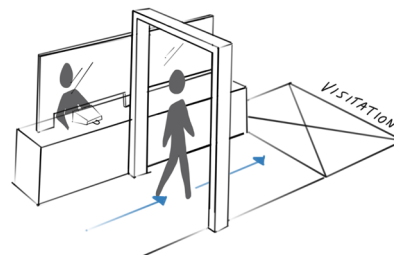
generic desk with protective shield and hand out space

- Bag check desk with a hole for self-checking of bag size and protective shield with hand over space for checking the content of bags.



bag check desk with hole, shield and bag hand over space, 2 types

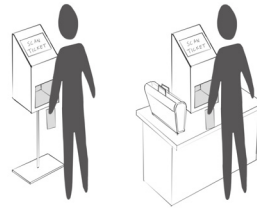
- For a security check, desks like above can be used for checking bags.
- For a body check specified security regulations have to be followed.
- Security checks might take substantial time, therefore more parallel check units might be helpful.



security check line with bag check desks, scanner and visitation area

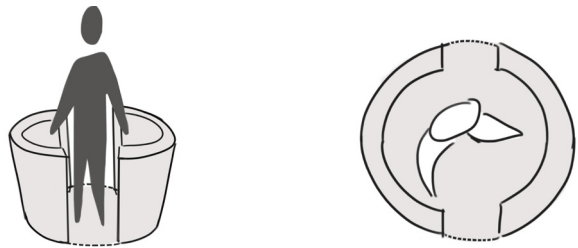
Functional

- Ticket checking can be done by self-scanners.



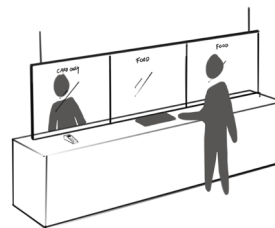
scanner for tickets, with or without bag rest

- For a host(ess) or guard a distancing help-fence can be helpful.
- This can be a dot or a circle on the floor or a more physical structure.



circular fence for host(ess)/guard in 2 parts

- Cashiers desks have a protective shield with a hand over space for card scanners and a sign for 'card only'.



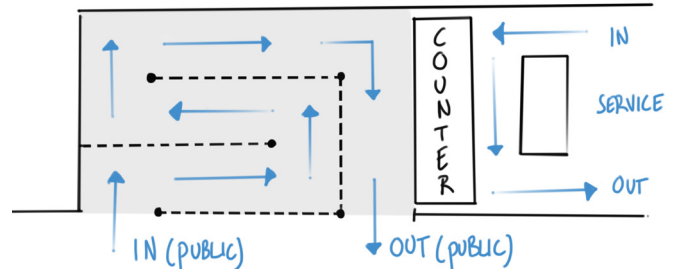
desks for cashiers and food & beverage handout with text shields

Functional

Cafes and Restaurants

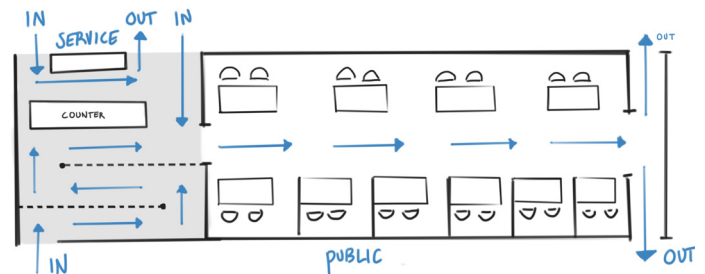
Set-up

- Different activities are lined up per café or restaurant.



take away set-up

- Restaurant with separate areas for waiting, ordering and seating.
- Flow of visitors and service staff are separated or flow in the same direction in the seating area.



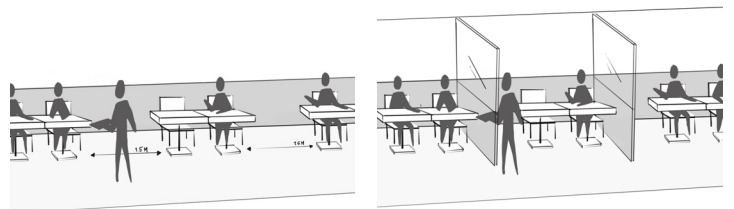
self-service restaurant with 2 types of seating, set apart and with dividers

- Counters and desks are glass shield protected with hand out space for card machines and food.



shield protected counters for cashier and food hand out

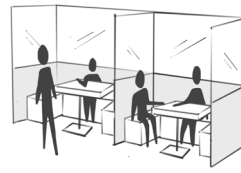
- Small tables with max allowed people are set apart at the required distance.
- Small tables with max allowed people set close together with dividers in between.



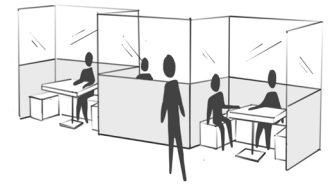
small tables at required distance small tables with dividers

Functional

- Alternative ways of setting tables with dividers and in zig-zag style.

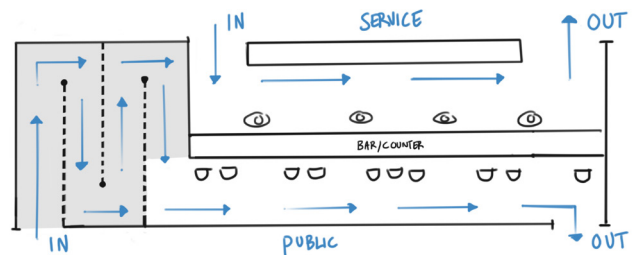


alternative set-up of tables with dividers



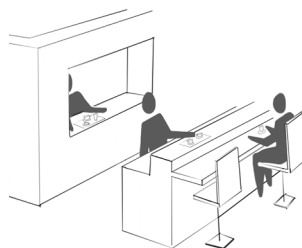
tables with dividers in zig-zag style

- Alternative restaurant with barstools at a high table-counter.



self-service restaurant with 2 types of seating, set apart and with dividers

- Once the visitor is seated, ordering, obtaining, eating and paying is done from the same position at the bar.
- Service and handout from a service lane behind a counter-bar.
- Kitchen service from a slit in the wall.
- Bar-counter potentially with a glass shield protection and hand out underneath.



bar-counter with seating and a service lane + kitchen behind



alternative with glass shield protection

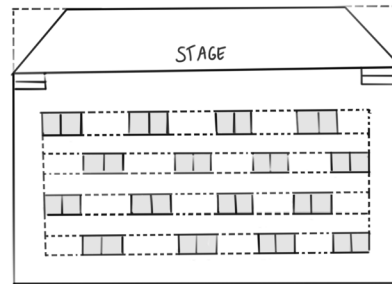
Additional measures

- Required protection wear for visitors and staff.
- Regular cleaning of all surfaces.
- Reduced diversity of menu.
- Pre-order possibility for takeaway.
- Pre-packed cutlery and napkins.
- Empty tables, cleaned after each visit.
- When using table cloth to be renewed after each visit.
- Disposable menu cards.

Functional

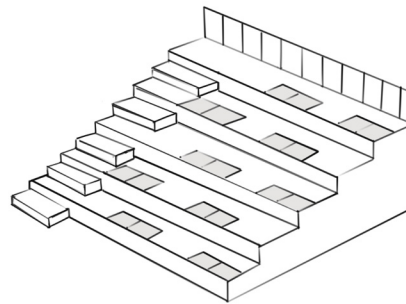
Talks, Auditorium

- In an auditorium room/hall the seats can be arranged in a different set-up.
- Checker board spread with sets of 2 chairs together.



checker board seating in an auditorium room or hall

- A freestanding seating structure can be reorganised in a similar way.
- Checker board placed cushions indicate the seating places.



tribune structure with checker board placed cushions

Functional

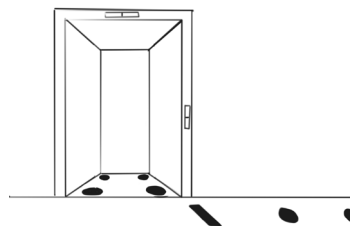
Gift shop and bookshop

- Consider creative solutions for gift shop and bookshop.
- Create an online store available through museum app/website.
- Shop only as a showcase.
- Shop only as a pick-up point, when delivery options are not feasible for museum.
- Shop as a warehouse: place objects of the shop inside the exhibition with a reference and collect your basket afterwards.

Building adjustments

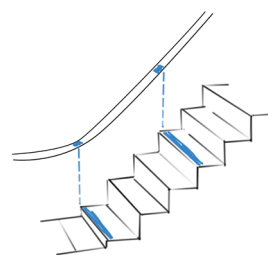
Elevators, escalators, doors

- Inside elevators dots indicate fixed standing positions.
- Indication on the outside for max load of people
- Waiting area next to the door, not blocking any flow.



feet-dots inside elevator and waiting line outside

- Marks on escalator steps or handrail indicate appropriate distance.
- Sign next to each escalator explaining that only every Xth step may be used.
- No overtaking on the escalator.
- All doors in the building that are used by visitors have an automatic opening system or stand open.
- Alternatively not frequently used doors can be equipped with elbow attachments to the handles.



marks on steps or handrail of escalator

Functional

Exhibition set-up

- Use advised national or local parameters for builders and shippers: allow for more days and hours for build-up, build-down and art to get in and out.
- For big installations use time slots for different areas and groups of workers.
- Longer working hours and working in shifts.
- Working in small groups.

MEP and HVAC

- Check local regulations and new local authorities measures.
- When the system allows it:
- Increase air supply to 6/8 room changes per hour.
- Avoid air recirculation.
- Use displacement ventilation as much as possible.
- Create air zoning of spaces.
- Consider energy consumption levels for lower capacities of the rooms.
- In existing situations: it is possible to create temporary solutions, if planned in advance with the exhibition designer and the technical team.

Communication

Online

Admittance

- Opening hours and days.
- Admittance through time slots both for visits and events.
- Online ticket sales.
- No physical card pick-up.
- Online VIP/Members card system.
- Online registering for parts of the VIP/Members program .
- Regulations for tours and special groups i.e. only in small groups and for specific time slots and following the same fixed routes.
- The total number of visitors allowed within the institution/event at any one time.

Social Distance

- Indicate the applicable social distance used, 1m (WHO, HK), 1,5m (EUR), 1,8m (USA), 2m (CH), 10m² pp (Eur), 20m² pp (Austria).
- Present floor plan with routing, queuing areas and functions (information desks, cafes, restrooms, etc.).
- Present phasing of visitors and occupancy of visitors per area /per space /per section/per function.
- Present internationally approved symbols to ensure that language doesn't raise a barrier.
- Sum up repetitive measures used at the venue.
- Measurements in place to organise visitor flow.
- Explain the protocols, symbols and measures to visually impaired and people in wheelchairs.
- Availability of a smart live app system (for public and management) for monitoring congestions and help managing crowds and flows.

Health measures

- Communicate specific national and/or local restrictions and measures that will have to be followed at the venue.
- Provide links to any and all relevant governmental/local guidelines.
- Include those for in- and outbound flights, hotels and transportation.
- Availability of mandatory protection gear (masks, gloves, face coverings) at the venue.
- Supplies of mandatory and additional protection gear for first hand-outs and replacements (after eating/drinking?)
- Inform people if and how a health check will be carried out.
- Better visibility of staff as they need (more) authority.
- Support staff visibility by (potentially fashionable and/or branded) clothes, protection gear and masks.
- Potential fashionable and/or branded protection gear and special fashionable clothes, veils and textiles for visitors.

Communication

Venue

Behaviour

- Rules and measures regarding admittance and behaviour.
- Mandatory and/or advised social distance.
- Advise personal Intelligent Social Distancing for visitors and staff at the venue.
- Floor plan with queuing, routing and functions (information desks, cafes, restrooms, etc.).
- Phasing of visitors and occupancy of visitors per area /per space /per section /per function.
- Symbols and rules for queuing, routing and flow.
- On the spot symbols and rules for elevators, escalators, restrooms and doors.
- Rules for approaching staff, explanation of their visibility.

Health measures

- Health check at first possible moment and place with explanation.
- Mandatory protection gear (masks, gloves, face coverings, anti-bacterial hand gel).
- Hand out of (additional) protection gear at the entrance.
- Availability of sanitisation points at the entrance and along the exhibition route (gel dispenser, additional fountains, etc).
- Audio equipment to be cleaned after use.
- Additional cleaning and protocol for door handles, restrooms, etc according to local and national regulations.
- Let visitors know that you have replacements for protection gear after for instance eating and drinking.
- Protect your staff and visitors and follow international and/or local rules (when stricter) for protection rules and measures.
- Bring fashionable and/or branded protection gear and special fashionable clothes, veils and textiles to visitors' attention.