Indoor Orienteering

ISInOM



New Dicipline to come

- IOF is working to establish a new ***dicipline*** for Indoor Orienteering
- Indoor Orienteering will then need a dedicated specification
- The goal for the specification is to produce easily understandable maps for the runners
- A **PRE-PRINT** of the specification is available at IOF web pages (orienteering.sport/iof/mapping)
- ISInOM
  International **S**pecification for **IN**door **O**rienteering **M**aps

Indoor – What's so special about that

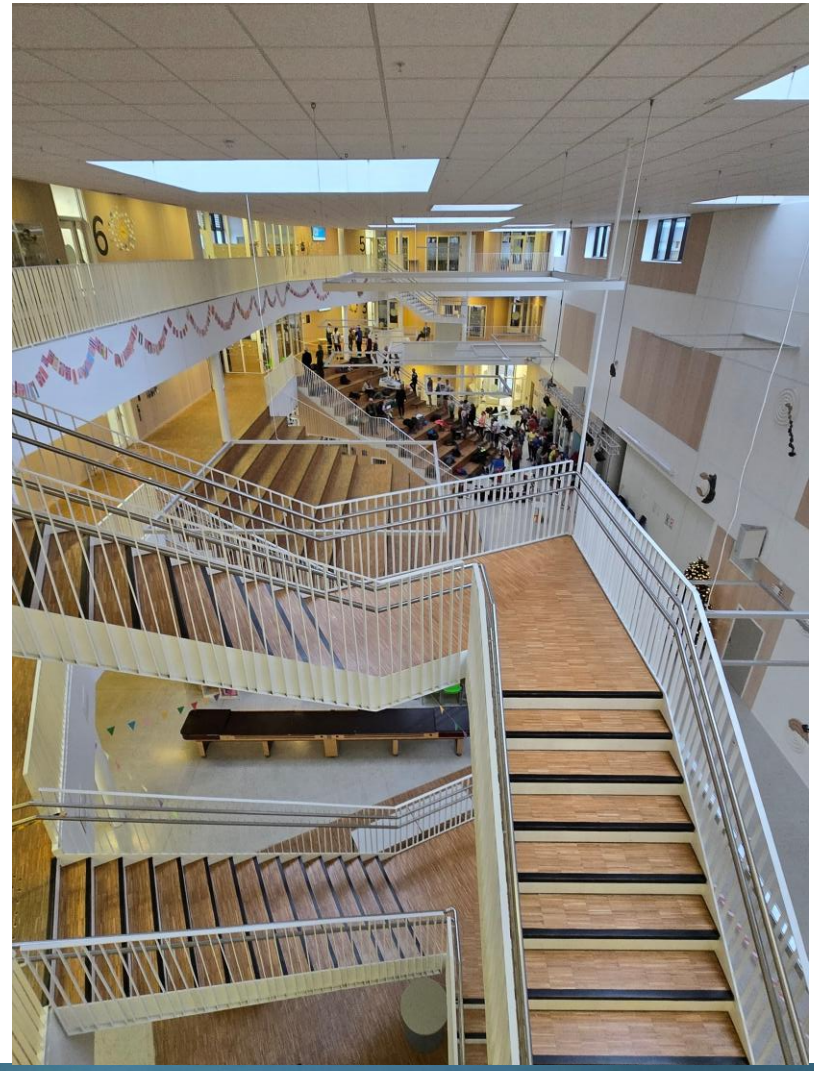
- Main difference to all other maps:
  - Multiple floors
    - STAIRS
  - Different categories – Indoor does not have
    - Landforms
    - Vegetation
    - …and of course ALL is MAN MADE, so no need for this category.
  - But we do need a category for Construction elements, such as walls and fences.
  - And one category for Furniture.





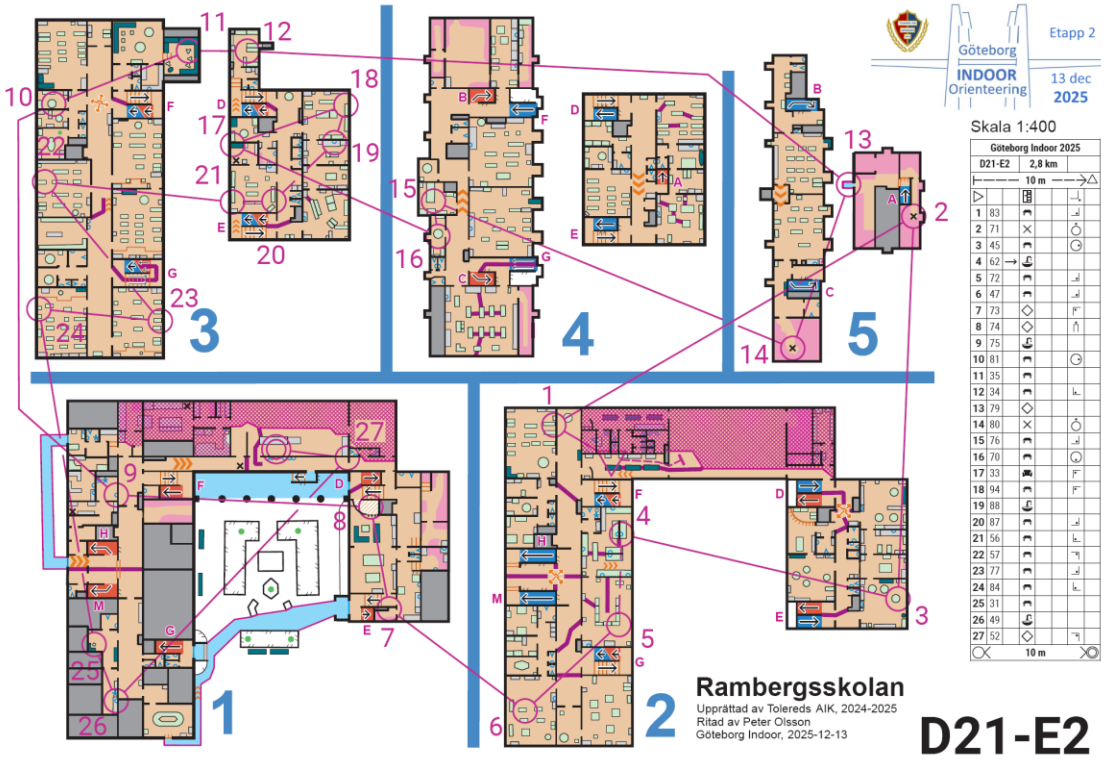
Indoor – What's so special about that

- Most important and different to other specifications: Floors
  - Any runnable area
  - Stairway
  - Lift
  - Ramp
  - Escalator



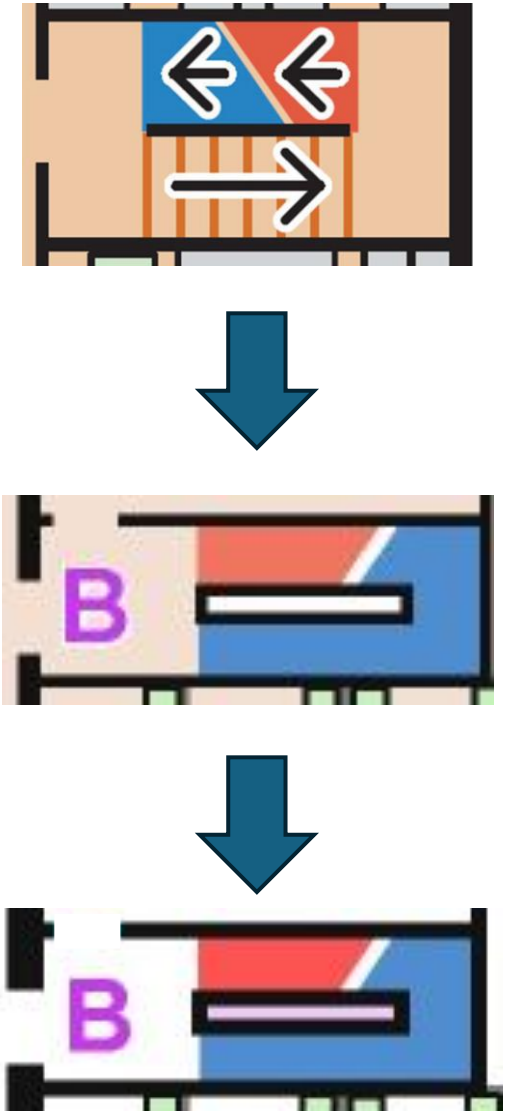
The birth of a new specification

- Organizers of Stockholm Indoor Cup (SIC) startet making a local specification document to ensure all organizers within the group made similar maps.
- In 2025 IOF picked up the idea of trying to establish a separate dicipline for Indoor orienteering.
  - To do so, they needed a specification.



The birth of a new specification

- The very first draft originated from the SIC document, but we had to make some changes.
- Along the route someone (in Sweden and Norway) came up with the idea to use plain colours for stairways going up or down.
  - This would make it far easier to spot the stairways on the map while running.



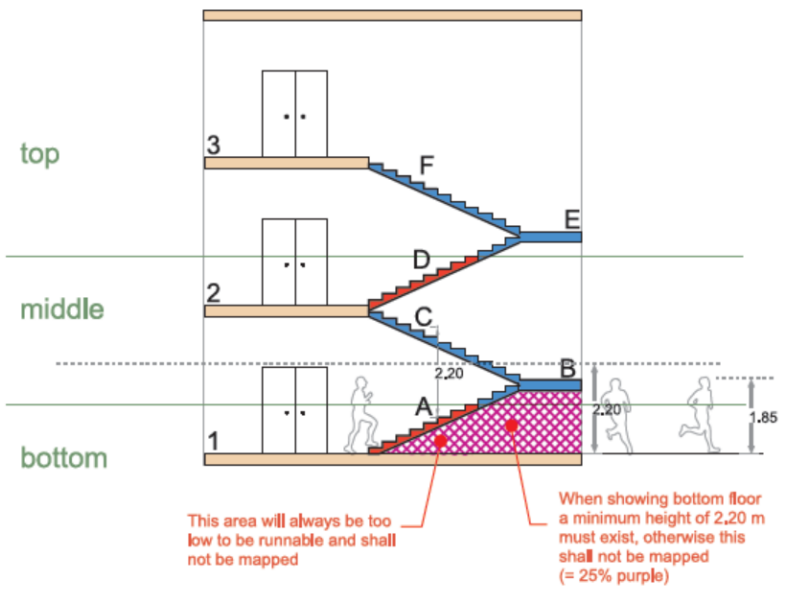
ISInOM contains some new colors

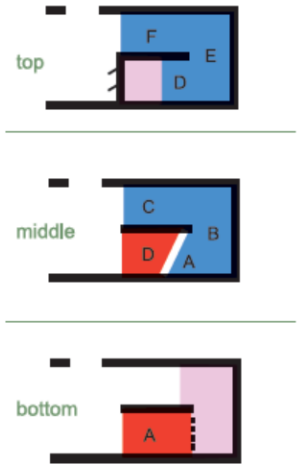
- New colors are made to avoid misunderstanding
- Modern technology is no longer a limitation (for colors)



Stairs in detail

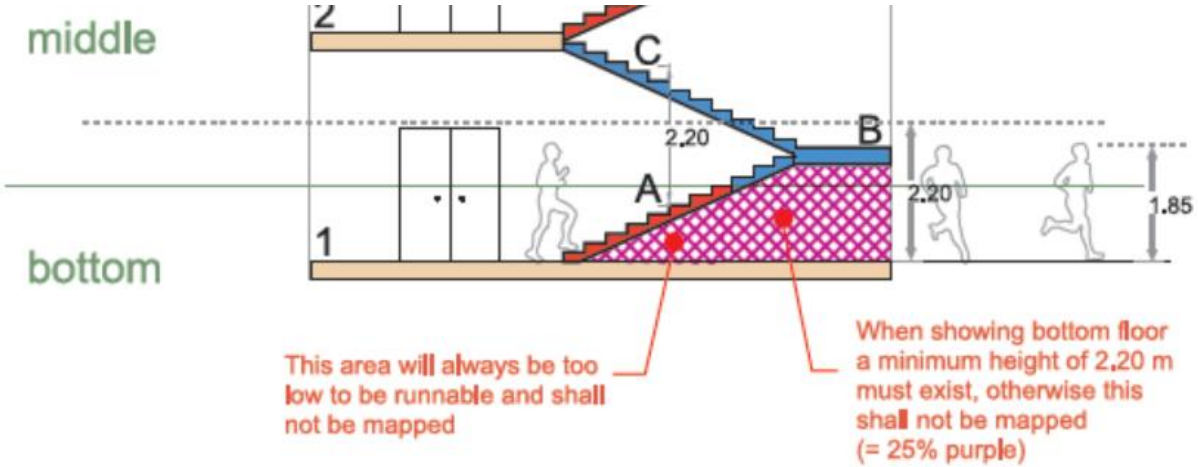
- The main difference (for stairways) is that now the landing (if any) is concidered a part of the stairway.
  - This means that the blue (or red) includes the landing. It now has a bigger coloured area and is easier to spot on the map.

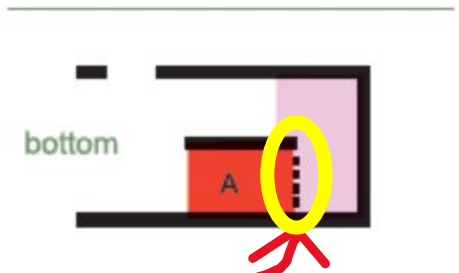




Each part of stairs is represented only **ONCE** on the map, that means that e.g. a landing must belong to **one floor only**.

Stairs in even more detail

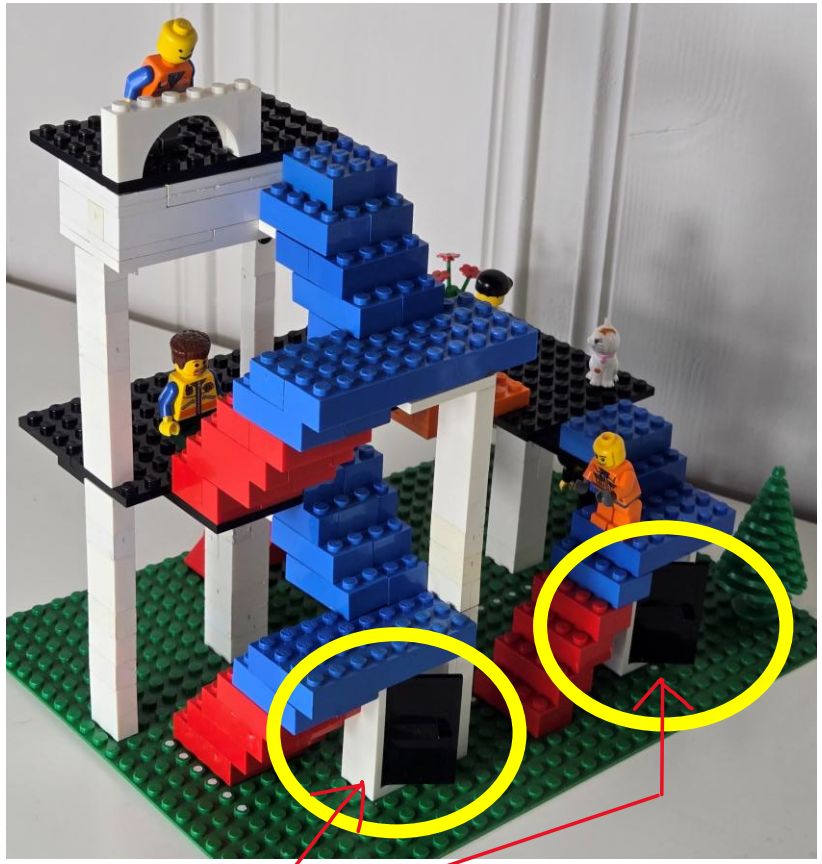




The area below the landing – if not proper standing height (min. 2.20 m) shall not be mapped. Instead use the (new) Purple 25%, and add 512.2 Underpass or tunnel / back of stairs to indicate Out-of-bounds area and impossible entrance to the stairs.

By adding the 512.2 Underpass or tunnel / back of stairs this tells the runner that the stairway cannot be entered from this side.

The trick

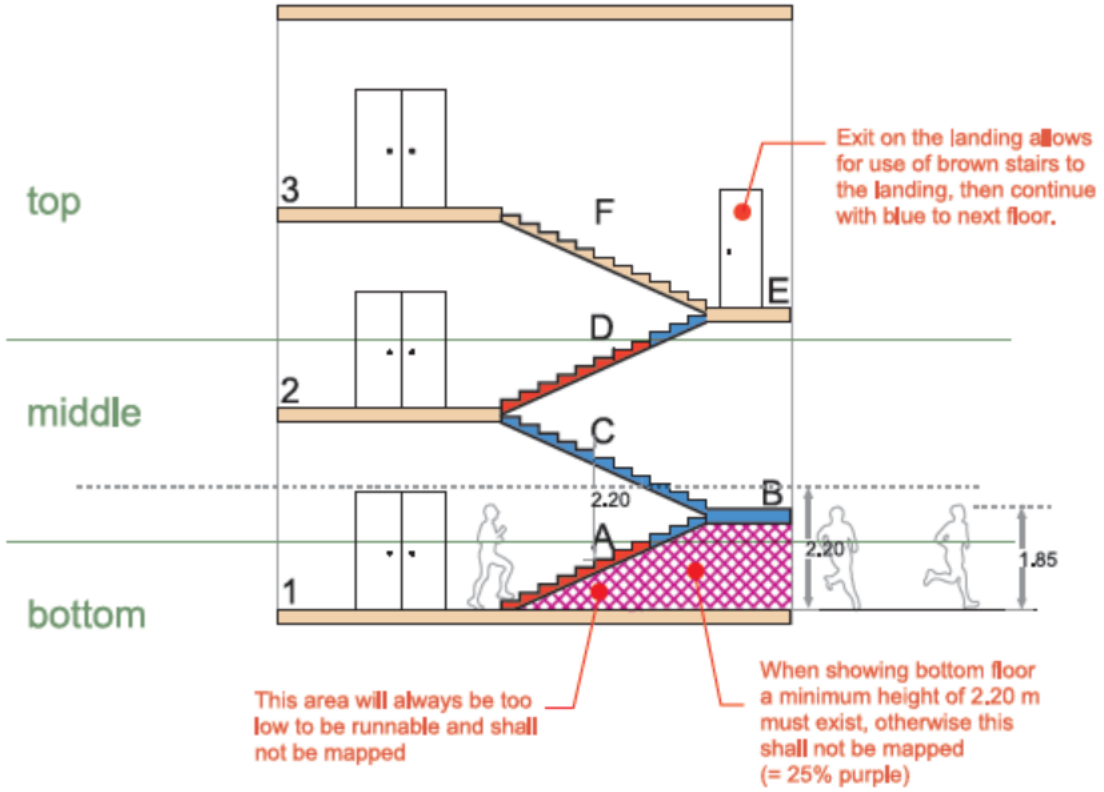


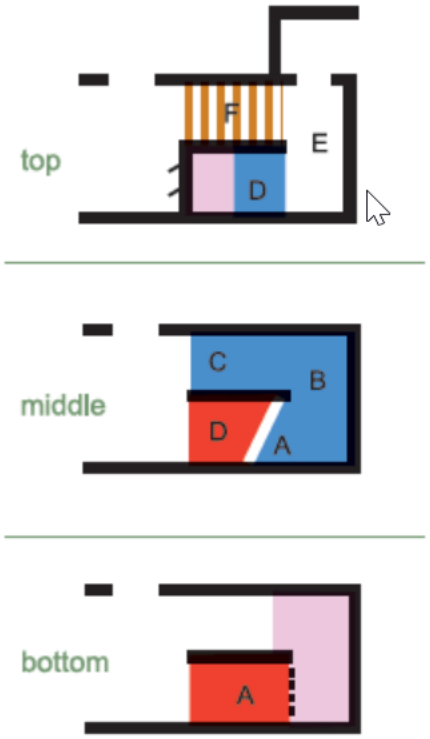
Start drawing the stairs from the top floor, meaning the stairs DOWN include any landing.

This will lead to available space underneath any landing where there is sufficient standing height.

More examples

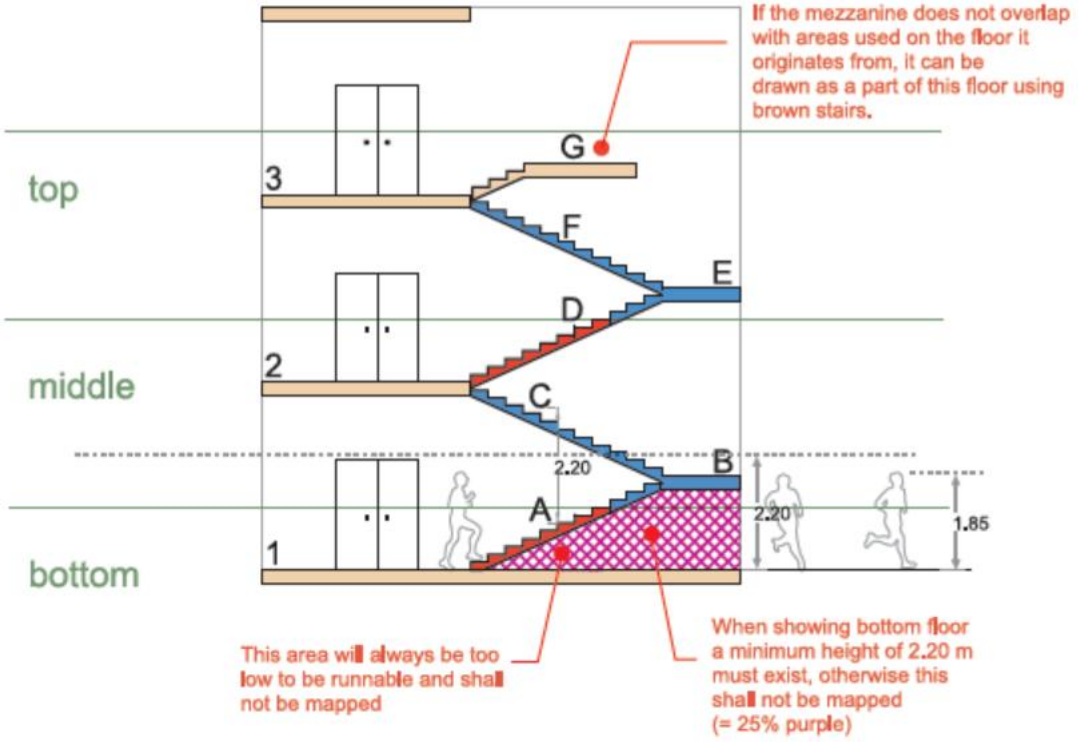
Example 2 – Stairs including landing with exit

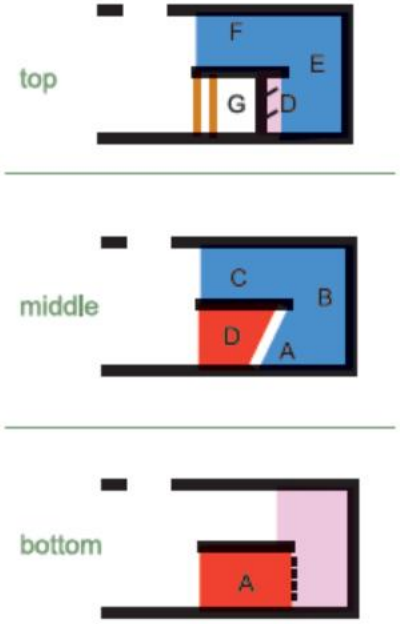




More examples

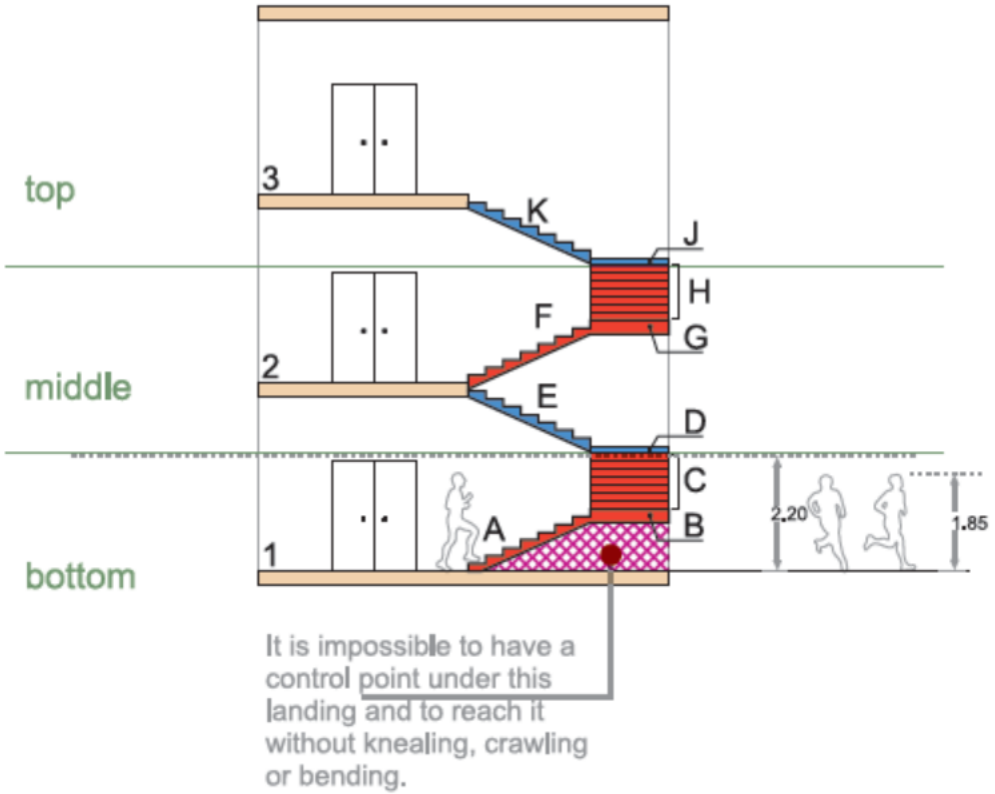
Example 3 – Stairs including mezzanine that does *not* overlap with originating floor

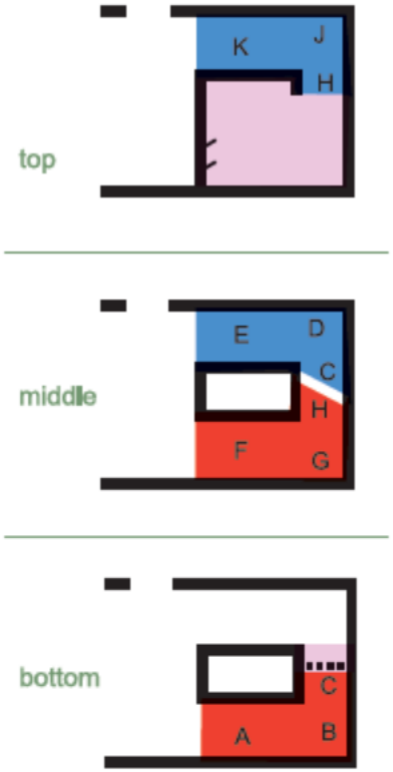




More examples

Example 5 – Stairs with two landings, or none

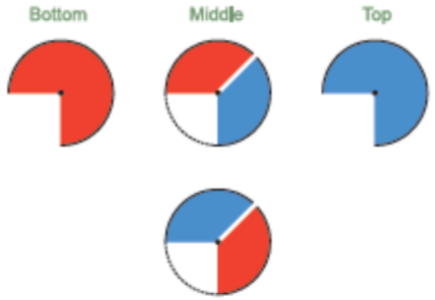




More examples

Example 6 – Spiral stairs

RED = only up
BLUE = only down
RED&BLUE = up&down



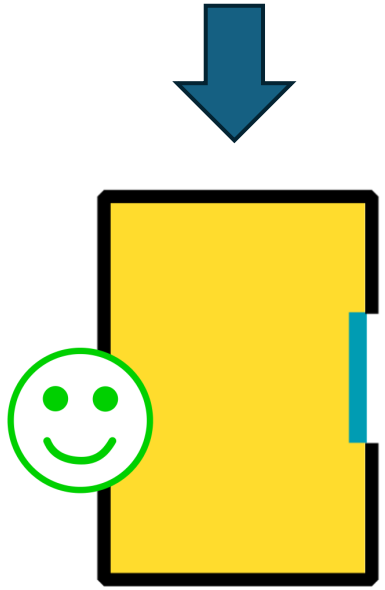
NOTE: Spiral stairs make more than one full turn before reaching the upper level.

Lift

- Separate symbol for lift was added. The aim is that this may be used for impaired – or as a joker (you never knows exactly where the lift will tak you)



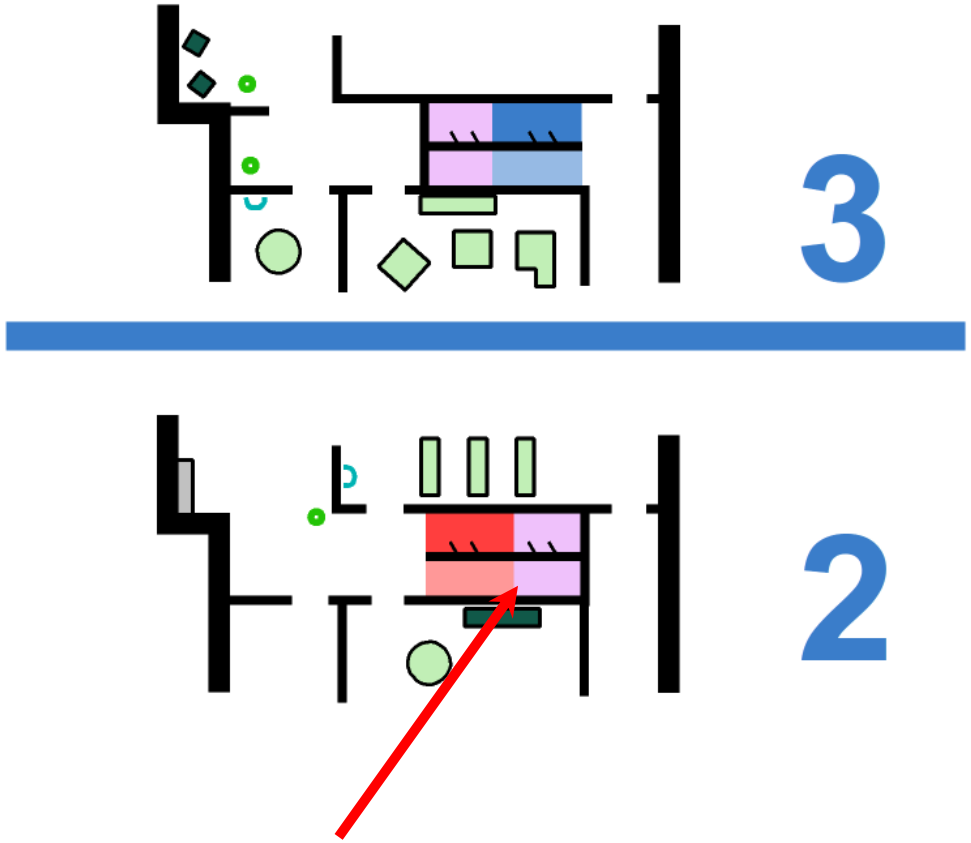
Stripes made an untidy, difficult to read area.



Bright yellow is easy to spot.

Ramps

- Ramps are almost like stairs; they might lead to another floor – or not.
- Ramps that lead to another floor act as stairways, it's just they don't have the steps.
  - This makes them faster to run, and also passable for impaired people.



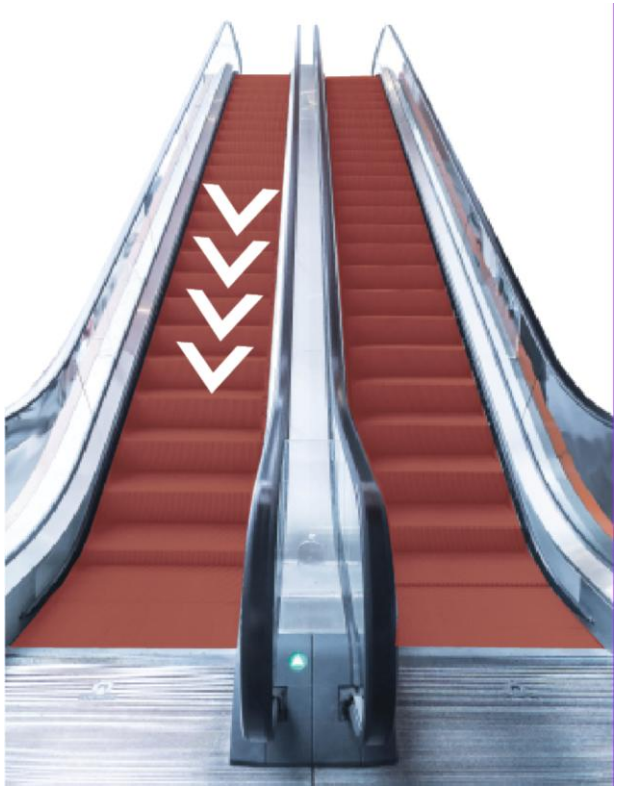
You don't need 512.2 *Underpass or tunnel / back of stairs* here, since there is no access to this area

Escalators

- Escalators on indoor maps are disliked by many, and loved by others.
  Therefore IOF has made symbols for escalators.
  - Then it's up to the mapper and course setter to use them or not.



Image by topntp26 on Freepik



Left escalator leads up to the floor above physically, but the rolling direction is down. Arrows indicate rolling direction if different from logic view.

Escalators that are <u>not</u> part of the runnable area shall be covered with hashes (709 – Out-of-bounds area)

Tricks for Drawing indoor maps

- If you do not have access to proper building plans, have a look around in the building and see if you can find Fire escape plans.
  - Take a picture of the plan.
  - Then use this as a background for your map.
  - If you need measurements, measuring an areal photo may give you what you need.







Tricks for Drawing indoor maps

- If using OCAD, whend drawing indoor maps, rotate the map so that the main structure of the map is exactly vertical or horizontal.
  - This way you can utilize OCAD's drawing features the most.

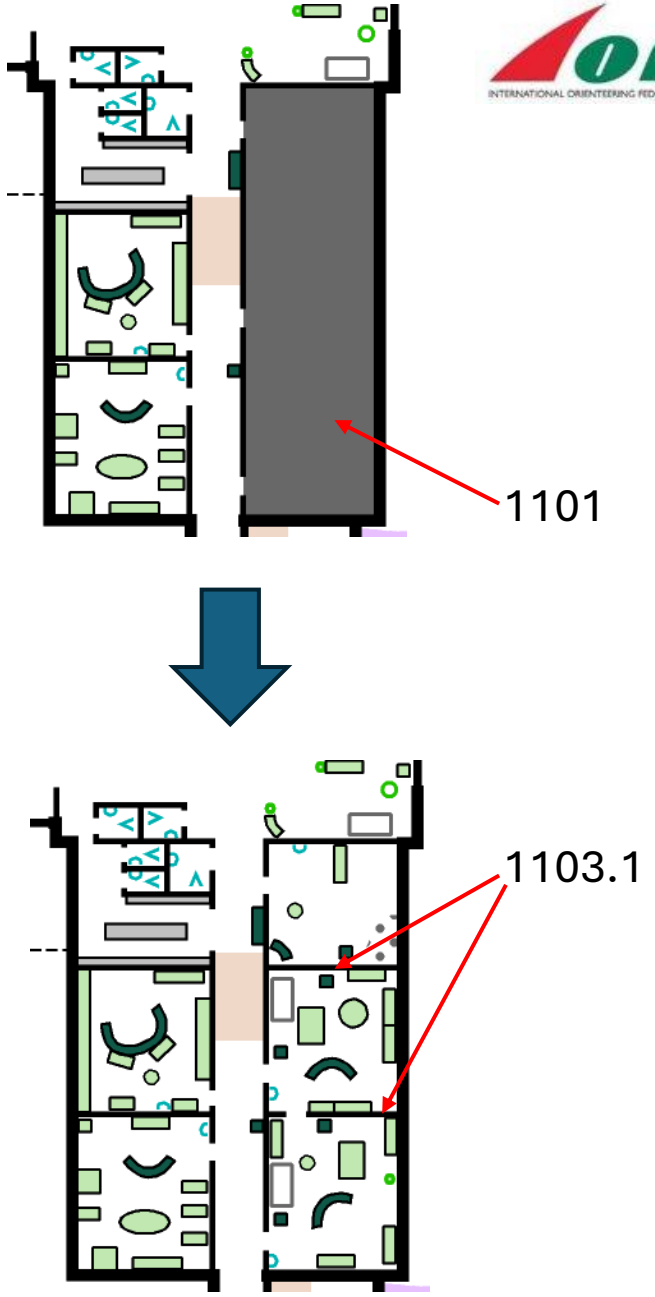
- Tip 1: Hold down the **Alt** key when drawing, this will give you true vertical or horizontal lines.

- Tip 2: When cutting openings, draw the entire wall – all through the building if possible,
  then cut the openings. This will line up walls nicely.

- Tip 3: For doors, create virtual gaps for door openings. This way it can easily be changed if necessary, knowing that the walls on each side match up perfectly.

Using the LOWER inner walls

- If the map is finished and some rooms are *temporarily not open for use*, then convert the walls to LOWER inner walls (1103.1).
- Then, by adding 1101 *Upper grey for not passable rooms for occasional* use will hide the walls and all furniture covered by the gray.
  - Ordinary walls will not be affected by the 1101.
- When the room is re-opened for use, then just remove the gray (1101). Then the contents of the room will be there as before – no need for re-surveying the room.



Courses may have additional challenges

Impassable barrier



One way run



Compulsory crossing

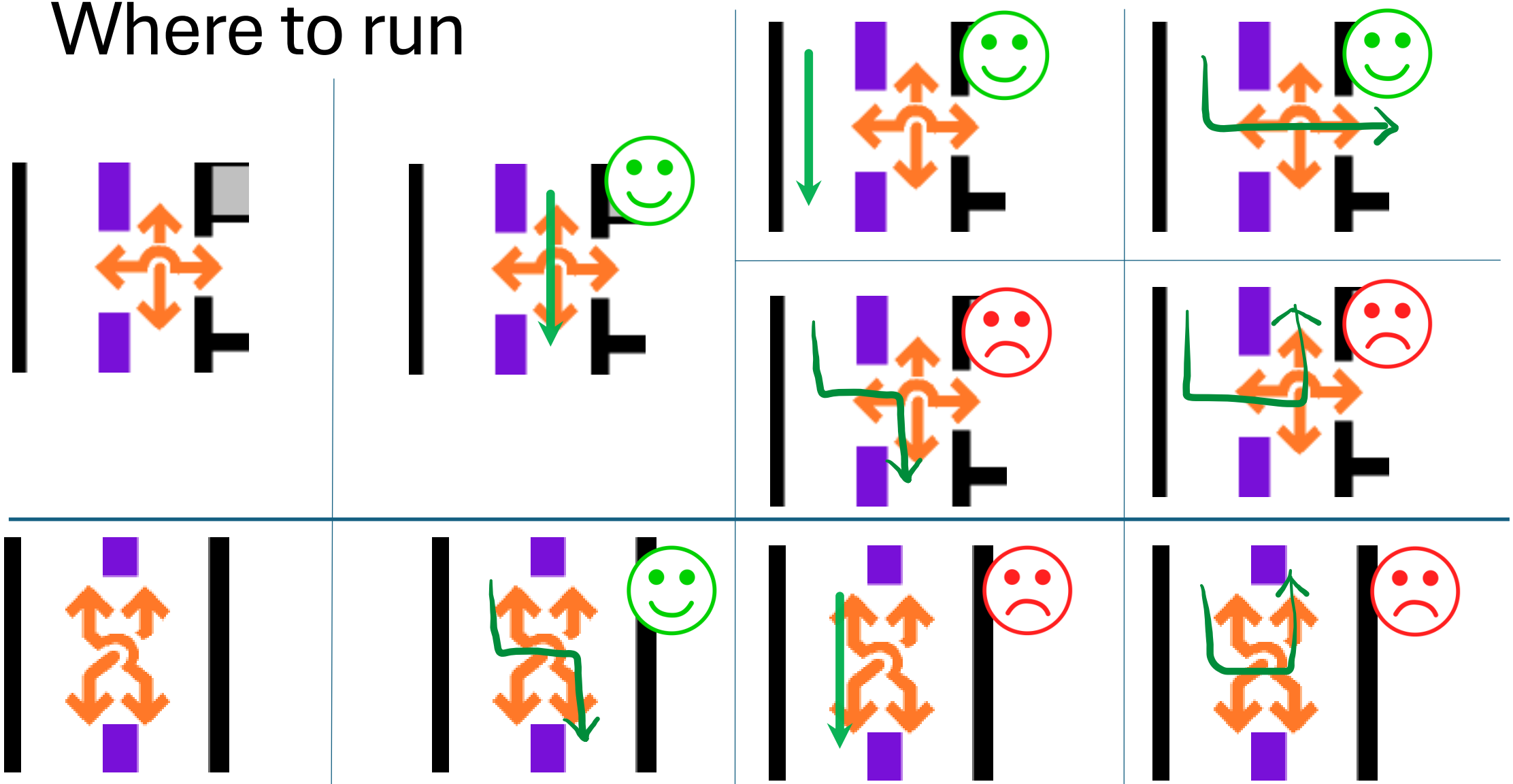


Diagonal switch





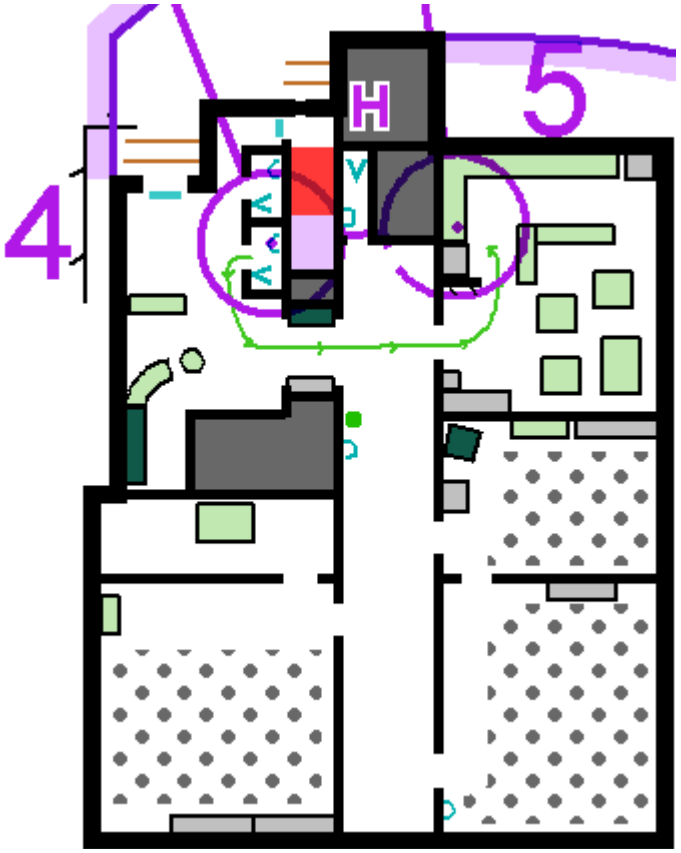
Where to run

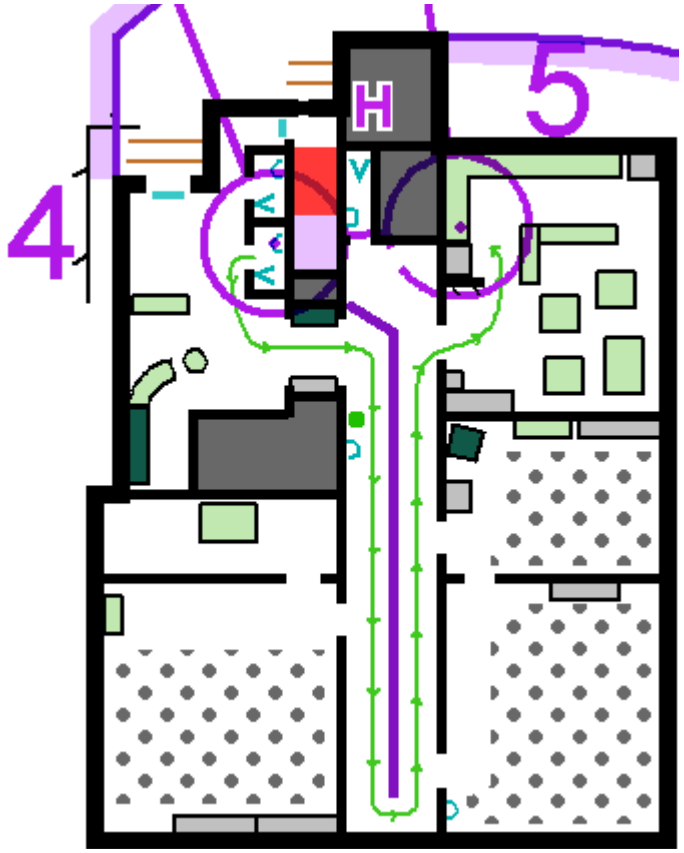


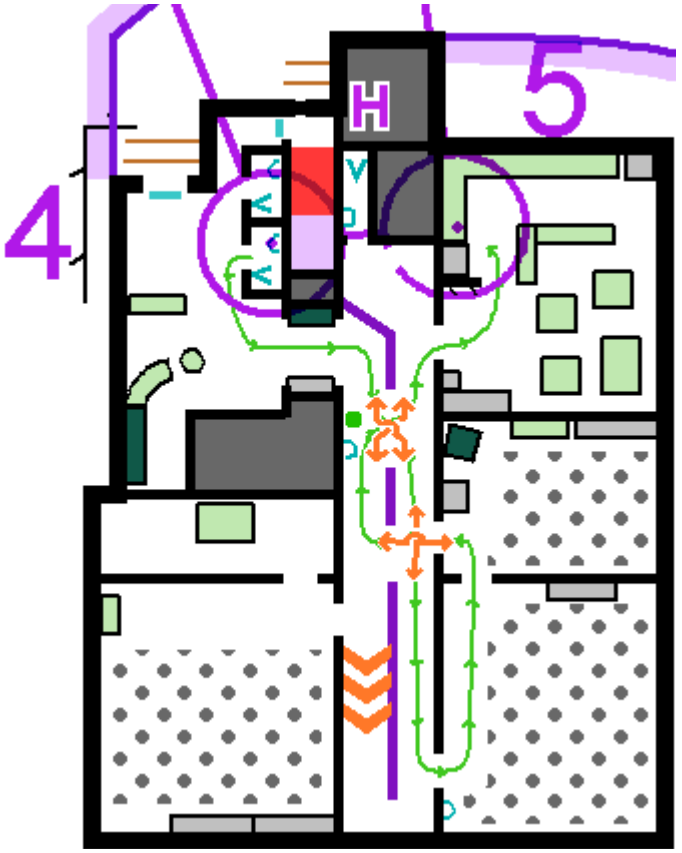
De-simplifying the map

- By adding additional features, the course may become more challenging.
- Assigning an area for not using challengig features gives you room for making easy courses. Important for recruiting runners.
  - If you have to place one-way arrows in an area where you will have beginners courses, then make sure they run in the arrow direction.

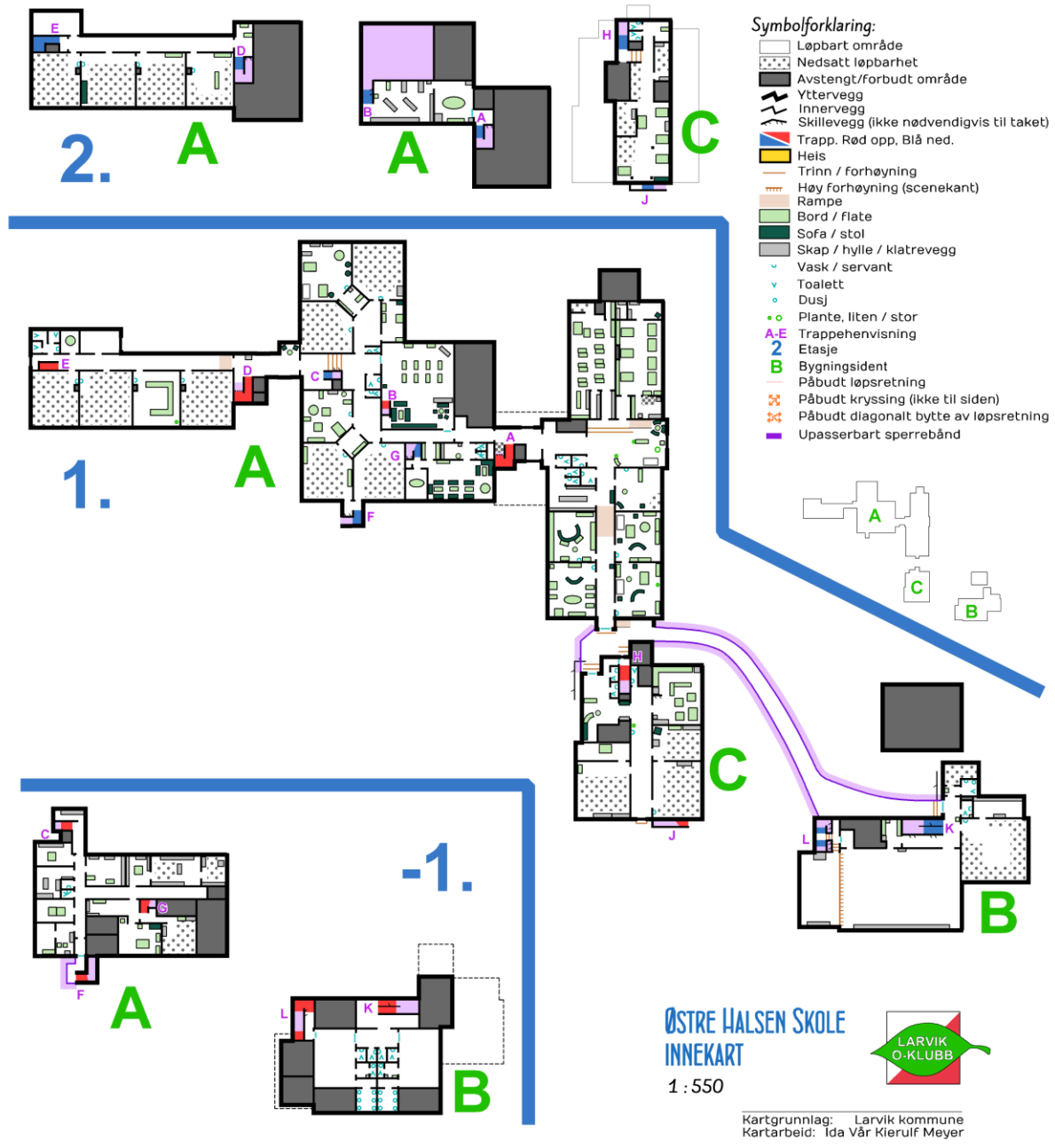
De-simplifying the course











ØSTRE HALSEN SKOLE
INNEKART

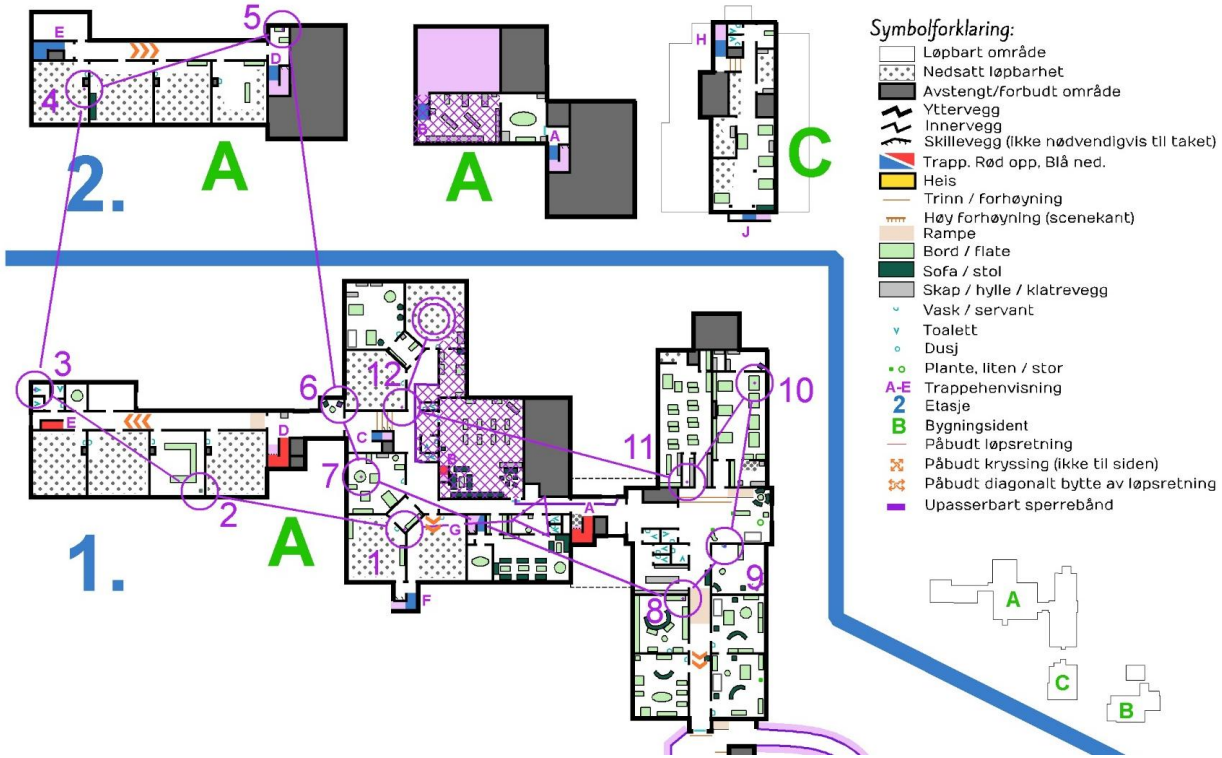
1 : 550

LARVIK O-KLUBB

Kartgrunnlag: Larvik kommune
Kartarbeid: Ida Vår Kierulf Meyer

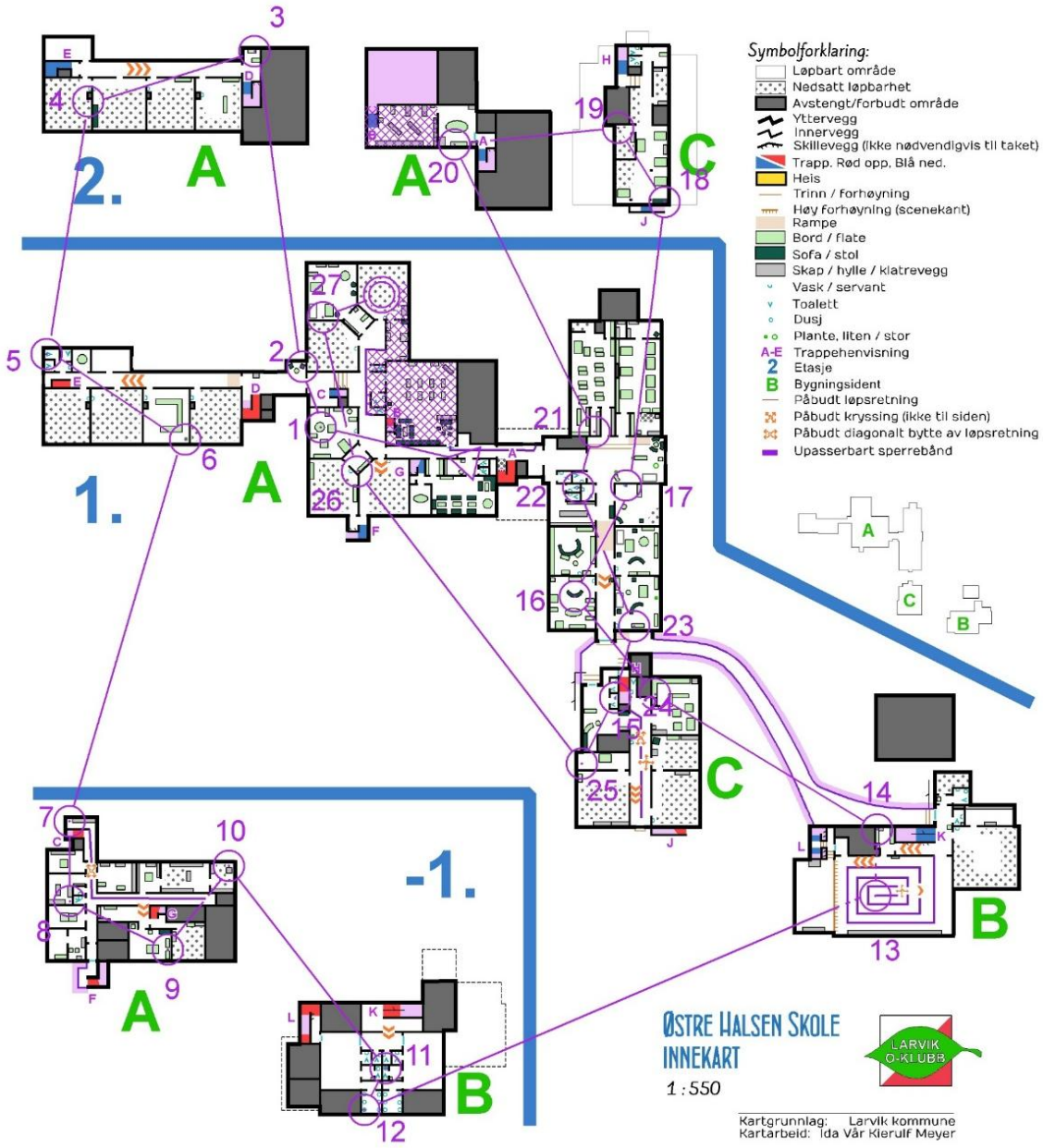
Examples of course levels

- Beginners level – if they have to change floor, then make sure the last control before stairs, and the first control after stairs, are close to the stairs.
  - Stairs is what the runners find the most difficult to understand.

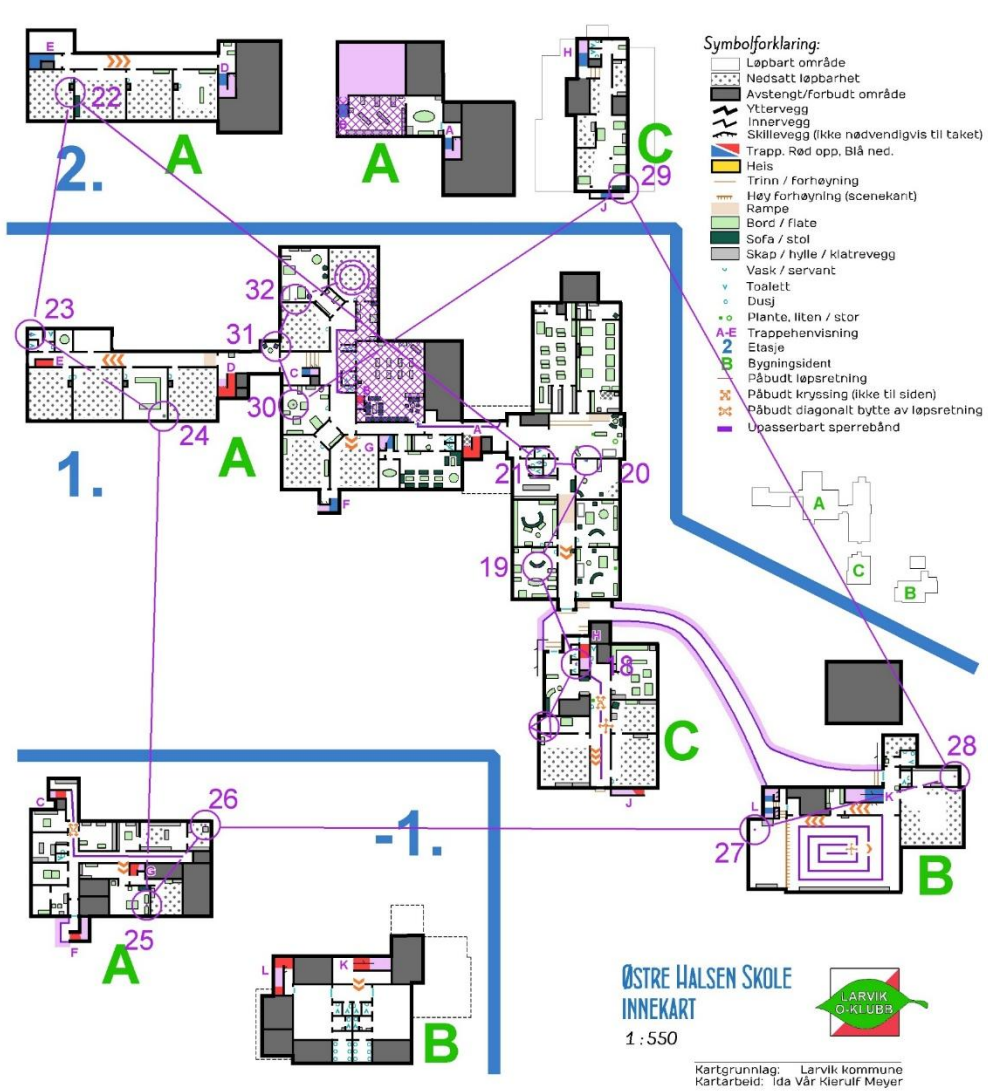


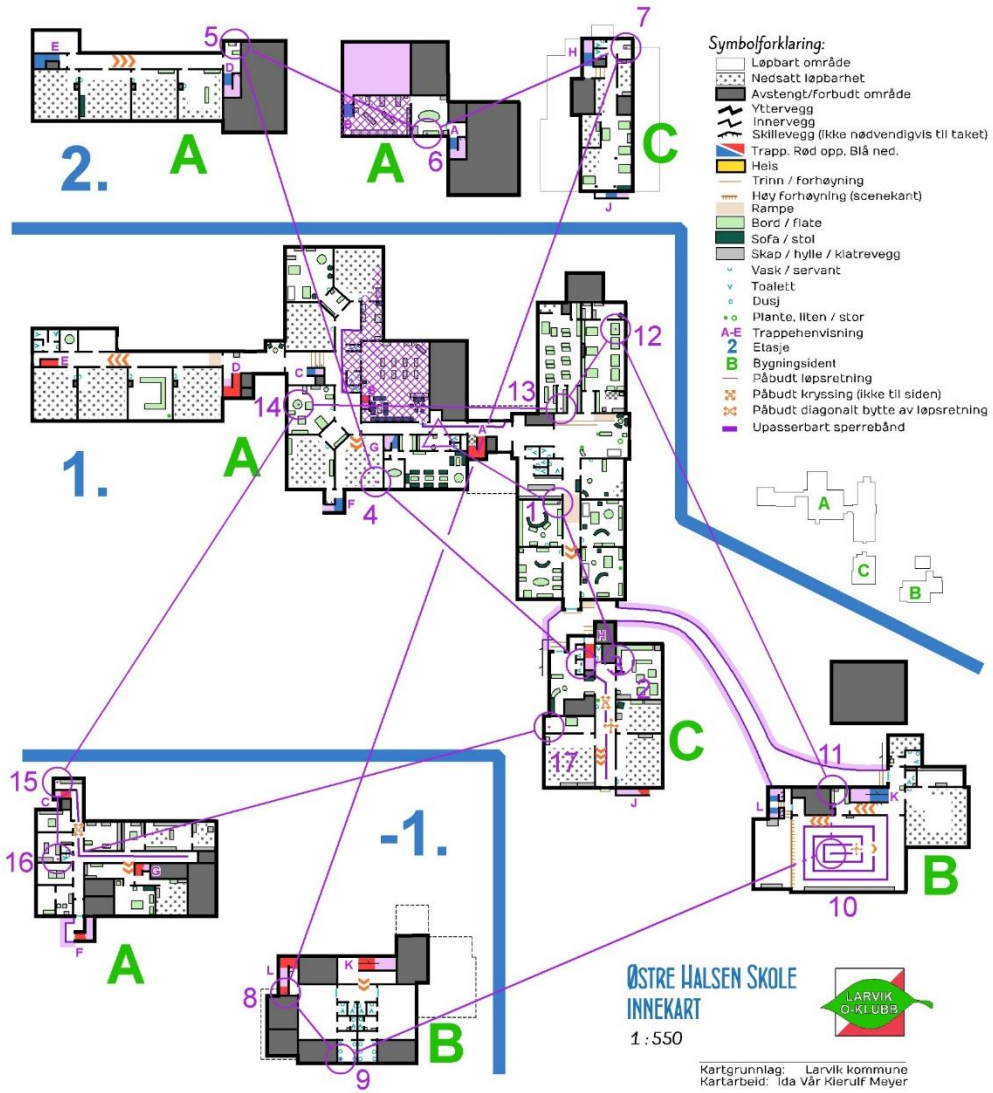
Beginners course

Examples of course levels



Intermediate course





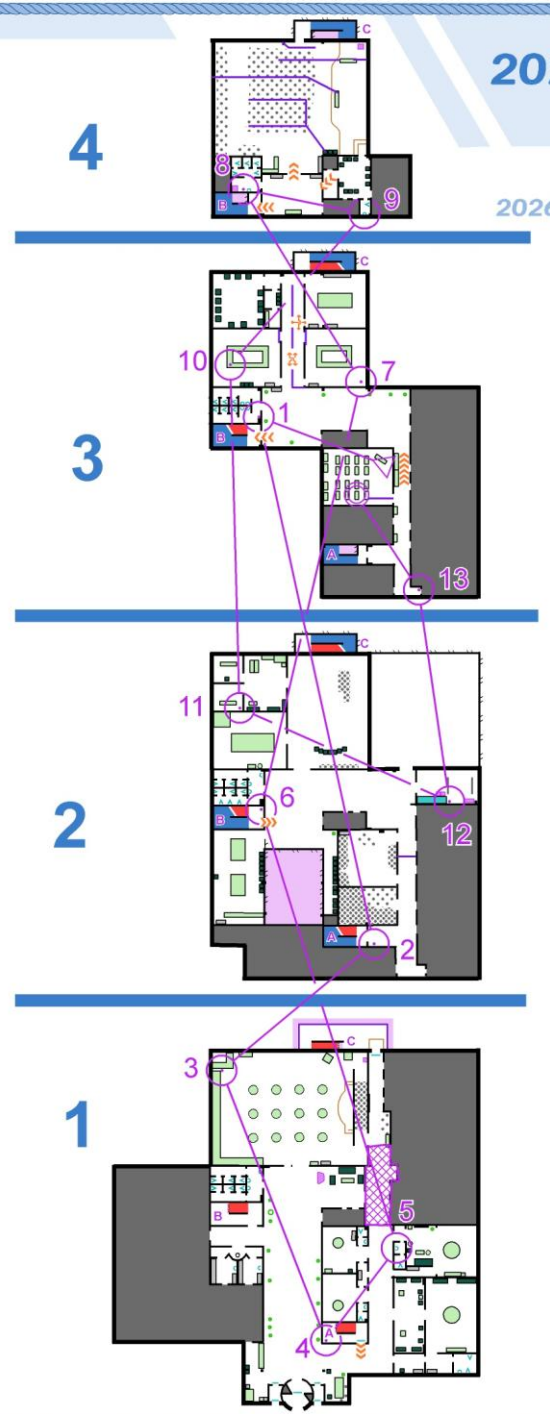
Advanced course

2026年全国定向运动制图员培训班

室内定向体验

2026 Mapping Clinic Indoor Event

Scale 1 : 700



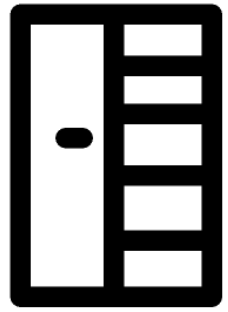
Indoor Challenge Oct. 14th 26								
Advanced			0,5 km					
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2	50							
3	49							
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10	34							
11	39							
12	38							
13	31							
20 m								

Mapper: Ida Vår Kierulf Meyer and 刘子琢

Specially made course setting symbols

- Symbols made so the runner easily understands





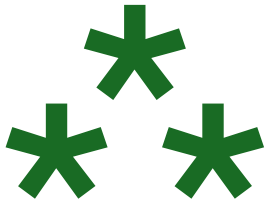




Map flip points

- Map flip points are not the same as Map flip done at a control.
- Map flip points are * symbols that makes the runner easily recognise a part of the map after flipping the page.
- In this way the map flip is optional, and does not necessarily need to be performed at a control. The runner can choose the flip according to route choise.
- Several map flip points may form a cluster, to create a different pattern of recognition to the single pont.





Organizing indoor race

- There is nowhere to put the stick.
- All controls should have a contrl marker – making it 3D.
- *Decoration on a stamp unit is not sufficient as a control marker since it's not evenly high.*

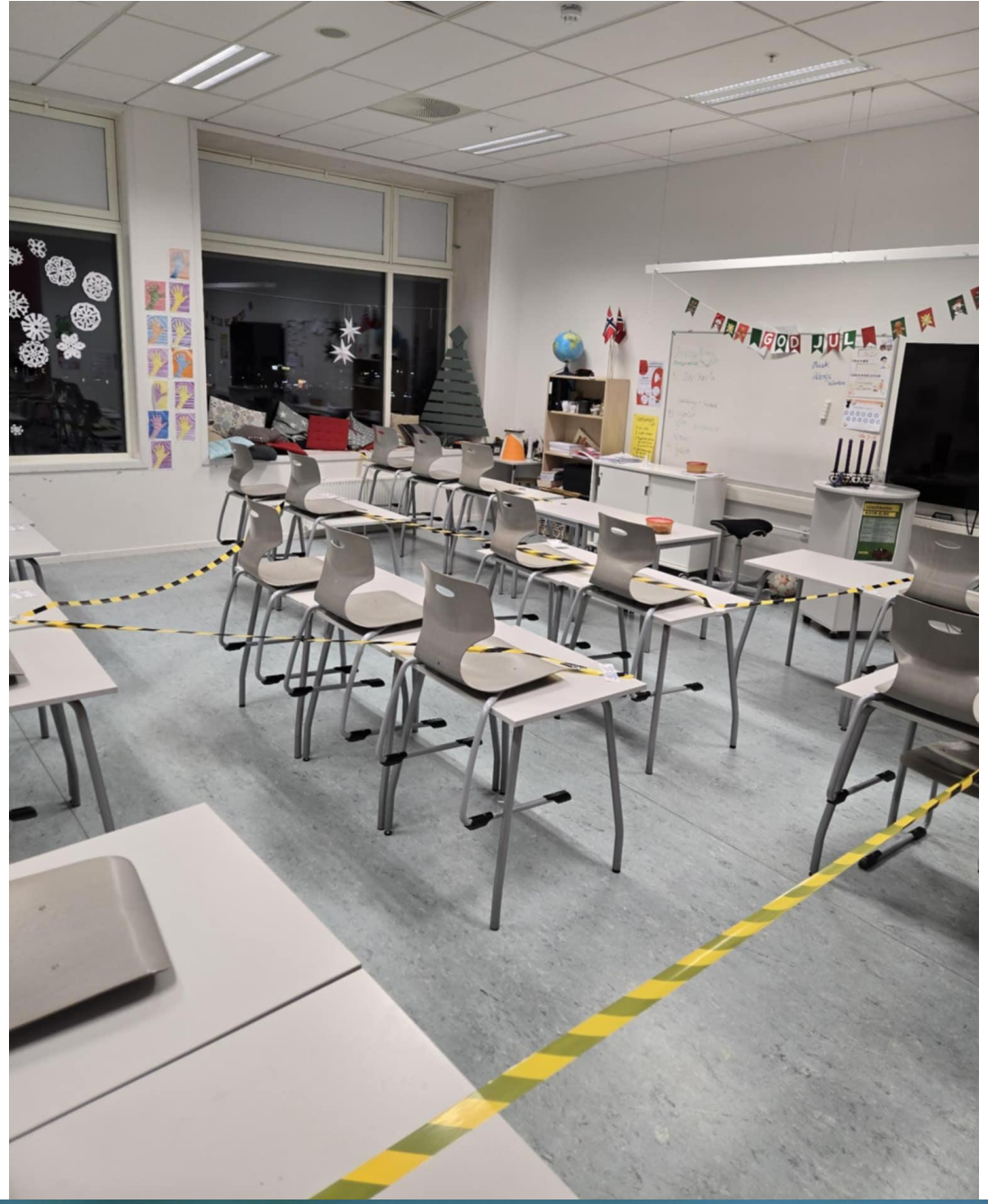








Inspiration




SWECO
NTNUI


VENEZIA
ORIENTERING


LOVE
KUL
KUL
FLOTT
GREI!
SOTA
fin
grei

