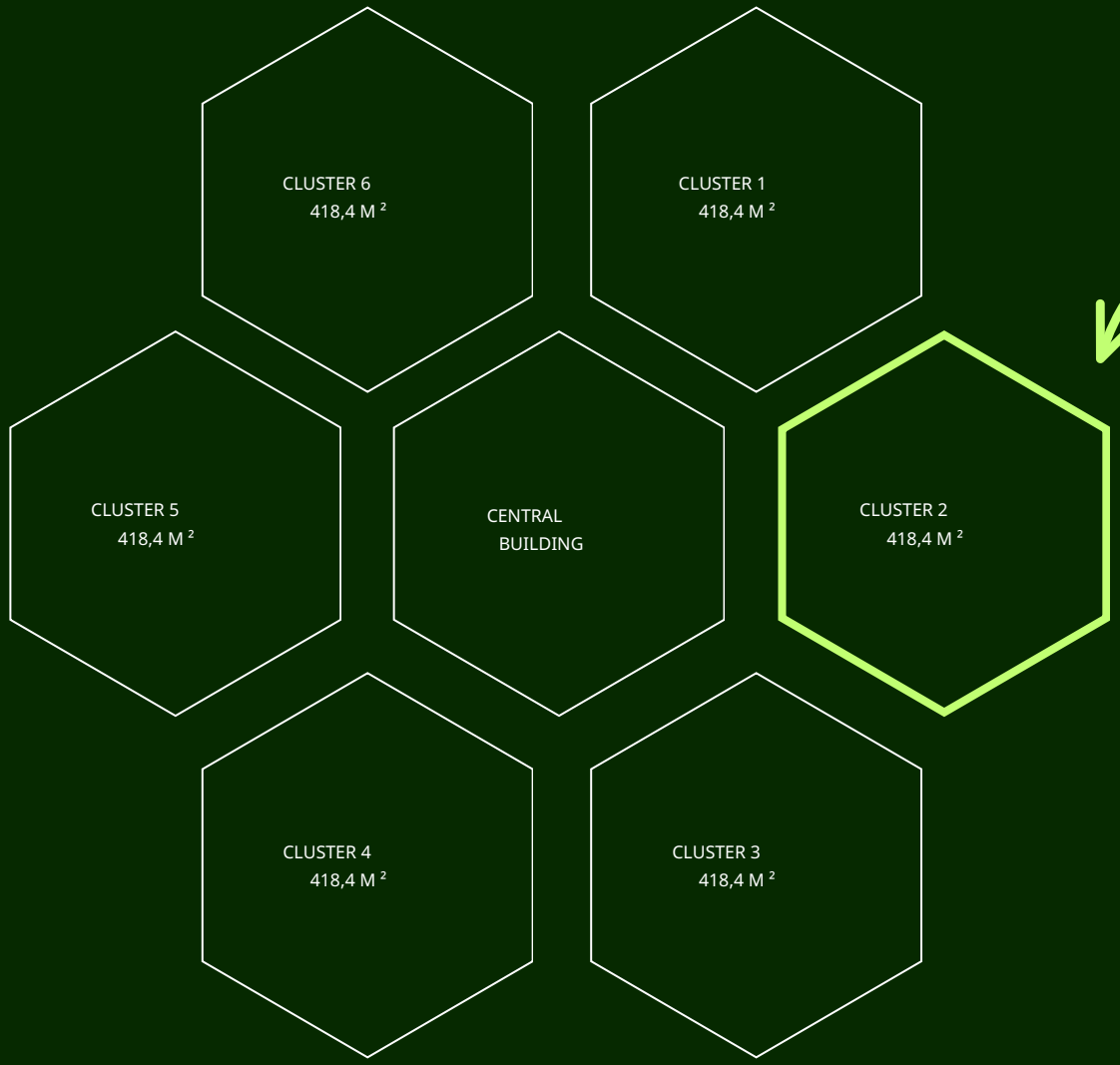
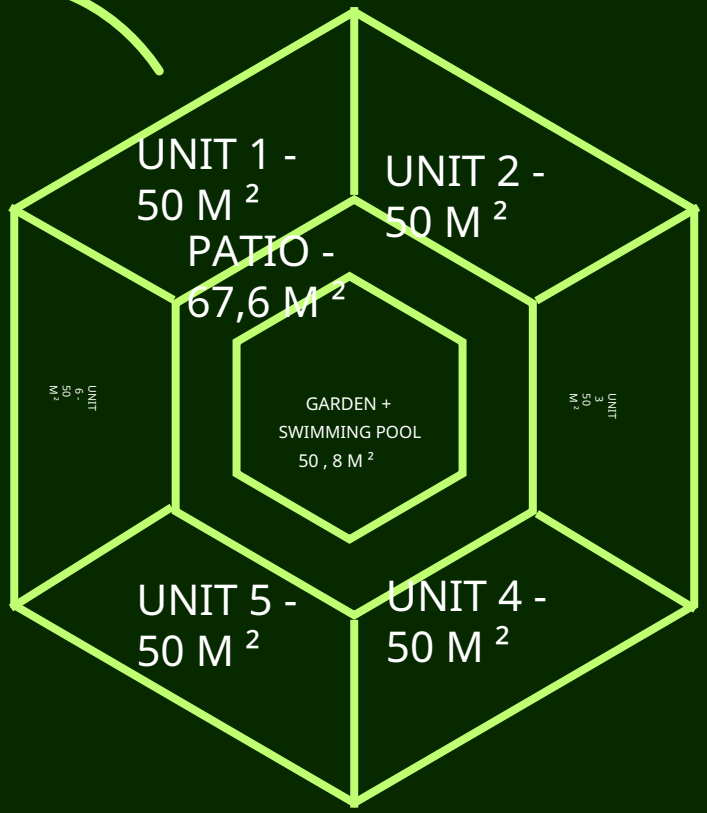
STICHTING A BETTER KONGO FOR THE PEOPLE | BY THE PEOPLE

PROGRAM OF REQUIREMENTS: ORPHANAGE

GLOBAL SKETCHES



6 CLUSTERS +
CENTRAL BUILDING IN THE MIDDLE



6 KINDER UNITS = 1 CLUSTER
TOTAL SURFACE 418,4 M ²

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FOUNDATION

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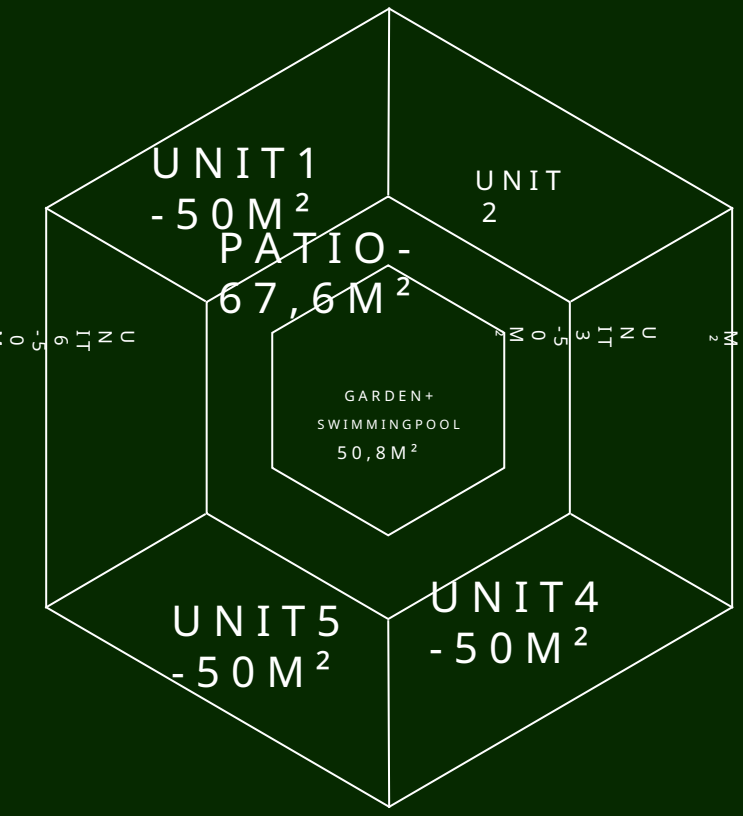
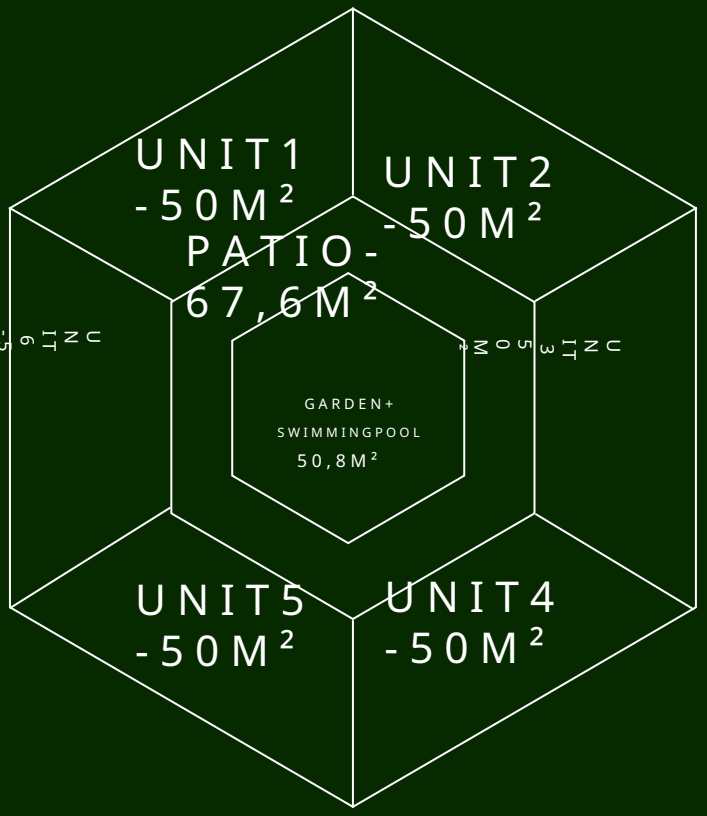
PROGRAMOFREQUIREMENTS:ORPHANAGE

GLOBALSKETCHES



SUPERVISORS-UNITS418,4M²



CHILDREN'SUNITS418,4M²

CENTRALBUILDING418,42M²

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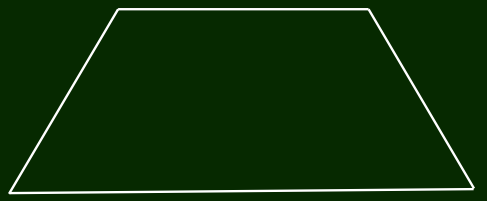

CHILDRENUNIT

PROGRAMMEOFREQUIREMENTS:WEESHUIS

1.GENERALSTARTINGPOINTS

- Type of house: Pile dwellings/Bungalows/Patio house
- Number of residents: 2-4 people
- Life stage: Children and teenagers
- Location: Just outside the capital (Kinshasa)
- Construction budget: Global
- Living area: 50 m BVO
- Number of floors: 1

2.SPATIALREQUIREMENTS

Living room

- Daylight entry ⩾10% of the floor area
- Ventilation: Type D, mechanical supply and exhaust
- Min. height: 2.6 m, width: 1.8 m and 5 m ^{2}
- Ventilation minimum of 21 dm /s.

Bedrooms

- 2 bedrooms
- Daylight entry ⩾10% of the floor area
- Ventilation: Type D, mechanical supply and exhaust
- Min. height: 2.6 m, width: 1.8 m and 5 m (13 m for 2 people)
- Ventilation: Purge facility 3 dm /s per m , open window

Walk-in closet

- Sufficient depth. Min. 60 cm for hanging clothes and 35-40 cm for shelves.
- Sufficient walking space. Min. 80 cm width
- A mix of hanging and laying space
- Good lighting
- Addition of accessory compartments (shoes, bags, jewelry)

Bathroom (shower + bath)

- 1 bathroom
- Minimum 1.6 m floor area and 0.8 m wide, 2.3 m high.
- Ventilation: Type A →Natural
- Ventilation minimum 14 dm /s
- Doors must be at least 0.85 m wide.
- A bathroom must be lockable with a lock.
- There must be a connection for drinking water and drainage for sanitary appliances.

Toilet

- Daylight entry ⩾20% facade area
- Floor area of at least 90 cm wide by 120 cm deep (or 0.9 x 1.2 m)
- Doors must be at least 0.85 m wide.
- Waterproof floor and walls in connection with moisture protection.
- Ventilation: Type B (mechanical supply, natural exhaust)
- Presence of sink

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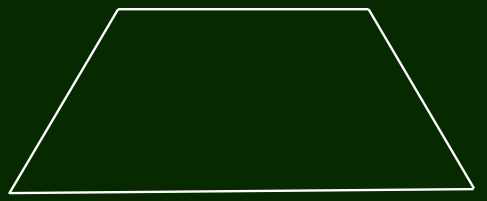

CHILDREN'SUNIT

PROGRAMOFREQUIREMENTS:ORPHANAGE

Workspace

- Daylight entry ⩾20% facade surface
- Surface area minimum 7.5m^2
- Width minimum 2.4m
- Height minimum 2.1m

Storage + MC

- Daylight entry ⩾20% facade surface
- Surface area minimum 5m^2
- Width minimum 1.8m
- Height minimum 2.3m

Patio

- Direct access from the house
- minimum 1 m outdoor space per dwelling
- Minimum width of 1.3 meters.
- Minimum surface area of 4 m.
- No height difference between house and patio (or maximum 2 cm) to be threshold-free.
- The patio must not unnecessarily obstruct the entry of daylight into the house obstruct.

3.TECHNICALANDCONSTRUCTIONREQUIREMENTS

Sound insulation according to Building Decree

- Airborne sound insulation between 2 houses must be at least 52 dB.
- Contact noise must be maximum around 54-59 dB
- Installation noise may be a maximum of 30dB in adjacent living space

Fire safety

- Max. surface area fire compartment dwelling: ⩽500 m^2
- Fire resistance for walls, floors, facades and house-separating constructions is 30 min (within 1 house) and 60 min (between 2 houses and to adjacent plot).
- Fire resistance supporting structure is 30 min.
- Fire resistance of house-separating wall 60 min.

Smoke detectors per floor

- Each house must have a safe escape route. Minimum 1 independent escape route with a maximum walking distance of 30m.
- Escape route must be low-smoke, sufficiently wide and without obstacles.
- At least 1 smoke detector on each floor, connected to mains power, with emergency battery.
- Installations must not cause a fire hazard.

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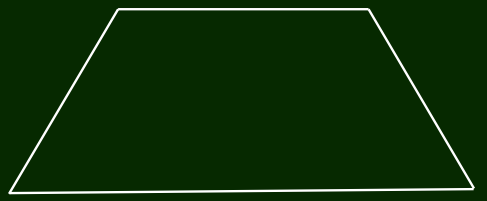

CHILDREN'SUNIT

PROGRAMOFREQUIREMENTS:ORPHANAGE

4.SUSTAINABILITYANDFUTUREPROOF

General

- Application of the detachability principle (design for disassembly)
- Materials must be demountable and remountable.
- Materials should be glued as little as possible
- Materials should preferably be mechanically attached

Materials - Biobased

- At least 30–50% of the materials used are biobased.
- Application of materials such as wood (FSC/PEFC), hemp, straw, flax, cork and bamboo
- Insulation materials: Preferably cellulose, wood fiber or sheep's wool.
- Materials must be testable via MPG calculation and possibly have a material passport.

Materials - Circular

- Reused or recycled materials are preferred
- Materials must have a low MKI value (Environmental Cost Indicator. This is a score in euros that reflects the total environmental impact of a product, such as building materials over the entire life cycle).
- MPG ⩽ 0.5 (ambitious, legally 0.8). The Environmental Performance Buildings (MPG) is a mandatory score in Dutch construction that assesses the environmental impact of materials in a building (the lower, the better).

Material transparency

- All materials used are recorded in: Material passport and BIM model
- Materials are provided with: Environmental data (LCA), lifespan indication and reuse scenario.

Sun protection and daylight

- External sun protection on south, west and east facades
- Presence of passive sun protection such as canopies, awnings and louvers
- Presence of solar control glass with low g-value

Heat resistance

- High thermal mass, such as the use of concrete, loam or wood fiber
- Night ventilation possible via ventilation grilles
- Limitation of glass surface on west facade
- Green elements such as trees for shading

Water storage and Rainwater

- Rainwater is processed as much as possible on site
- Application of infiltration crates, wadis, rain barrels or water-permeable paving.

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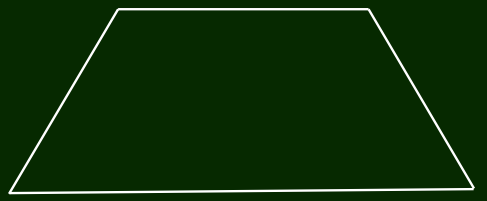

CHILDREN'SUNIT

PROGRAMOFREQUIREMENTS:ORPHANAGE

Flood and drought resistance

- Installations above ground level
- Water-resistant materials on the ground floor
- Capillary break in foundation

Thermal envelope: Near-energy-neutral (BENG)

- BENG 1: Maximum energy demand. This is the energy required for heating and cooling the house per year, expressed in kWh per m of usable area per year (kWh/m .yr).
  - Energy demand must be less than approximately 55 – 65 kWh/m per year (depending on size/ratio)
- BENG 2: Primary fossil energy use. This determines how much fossil energy (such as gas) may be used at most for heating, hot water, ventilation and cooling, also in kWh/m per year.
  - This must be less than 30 kWh/m per year
- BENG 3: Minimum share of renewable energy. This is the percentage of the energy demand that must be generated from renewable sources (e.g. solar panels), expressed as percentage (%).
  - Must be greater than 50% of the energy demand.
- TOjuli indicator: This looks at the risk of overheating in the summer and must remain below a certain limit (e.g. $\leqslant$ 1.2).

5.LAWANDREGULATIONS

Urban Planning & Building Permit Rules

- For any sustainable/semi-sustainable construction in an urban area, you need a building permit in advance, and the project must comply with the “normes d’urbanisme et d’habitat” (urban planning and housing standards) and the regulations of the location.
- The application requires an administrative and technical file (plans, implantation, sections/facades, etc.)

Zoning plan

- The project must fit within the permitted function(s) of the zone (residential, mixed, etc.).
- Before purchasing, a written confirmation/data from Urbanism must be requested regarding the zone designation and building parameters.

Architectural regulations

- The design must comply with Urbanism regulations regarding implantation, volume and views, because facades/sections are part of the permit file (and therefore assessable).

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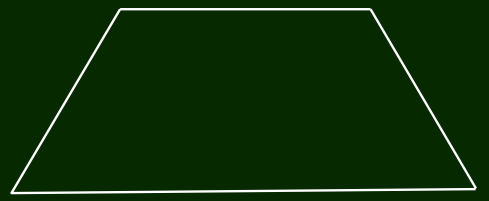

CHILDREN'SUNIT

PROGRAMOFREQUIREMENTS:ORPHANAGE

Maximum building height

- Maximum height can be verified per zone/plot via Urban Planning (plan director/PAU/zoning or local regulations).
- Project meets permitted height and any building lines as determined by the competent urban planning authority.

Building percentage

- Building degree (footprint and/or floor area in relation to plot) can be verified and is determined via the urban planning regulations that are assessed during permitting.
- Project respects the permitted ground coverage (soil surface) according to local regulations.

In summary

- A permis de construire (building permit) is required for building. The design and file contain at least floor plans, sections and facades in accordance with the national procedure.
- The function and urban planning parameters are determined on the basis of local zoning/plans and confirmation by Urban Planning.
- Maximum building height and building parameters are per plot verified in writing by the competent urban planning authority before final design.

- Land title: Purchase only after verification of valid title/registration (preferably certificat d'enregistrement) and cadastral control (surface area, boundaries, any charges).

6.LANDTITLEANDLEGALCERTAINTY

Minimum requirements for the land for purchase

- Plot must have a legally verifiable ownership/right of use, ideally via certificat d'enregistrement (registration by the Conservateur des titres immobiliers).
- Have cadastre/demarcation carried out or verified (boundaries/area).
- Check whether the plot is in a zone where (temporarily) no building/parceling is allowed. This can be done via local plans/government decisions.

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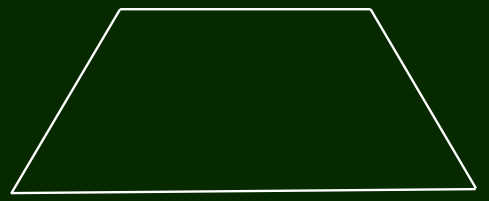

CHILDUNIT

PROGRAMOFREQUIREMENTS:ORPHANAGE

FUNCTIONALPROGRAM(PERSPACE)

Space	Min. area	Function	Relationships
Living room	> 5 m²	Sitting, relaxing	Direct relation with kitchen & patio
Bedroom 1	> 5 - 13 m²	Sleeping/studying	Near bathroom
Bedroom 2	> 5 - 13 m²	Sleeping/studying	Near bathroom
Walk-in closet	-	Storing clothes/shoes	Near bedroom
Workspace	> 7,5 m²	Doing homework	Near bedroom
Bathroom	> 1,6 m²	Showering, relaxing	Near bedroom
Patio	> 1 m²	private outdoor space for relaxation, dining and gardening	Direct relation with house
Toilet	> 1,08 m²	Collecting and flushing urine and feces	Near bathroom
Storage and Meter cupboard	> 5 m²	Storage and installation	Secluded
Total	> 50 m²	Sheltered place for permanent residence	N/A

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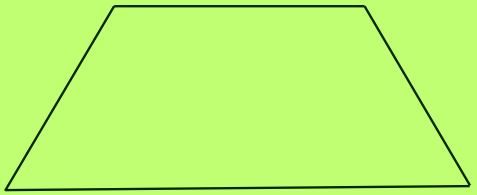

SUPPORTUNIT

PROGRAMOFREQUIREMENTS:WEESHUIS

THE UNITS OF THE SUPERVISORS ARE THE SAME AS FOR THE CHILDREN, BUT WITH TWO DIFFERENCES. THE DIFFERENCES ARE ON THE RIGHT SIDE --->>

1.GENERALSTARTINGPOINTS

- Number of residents: 2 people
- Life phase: Adults

FUNCTIONALPROGRAM(PERSPACE)

Space	Min. area	Function	Relations
Living room	> 5 m²	Sitting, relaxing	Direct relationship with kitchen & patio
Bedroom 1	> 5 - 13 m²	Sleeping/studying	Near bathroom
Bedroom 2	> 5 - 13 m²	Sleeping/studying	Near bathroom
Walk-in closet	-	Storing clothes/shoes	Near bedroom
Workspace	> 7,5 m²	Doing homework	Near bedroom
Bathroom	> 1,6 m²	Showering, relaxing	Near bedroom
Patio	> 1 m²	private outdoor space for relaxation, dining and gardening	Direct relationship with home
Toilet	> 1,08 m²	Collecting and flushing urine and feces	Near bathroom
Storage and Meter cupboard	> 5 m²	Storage and installation	Secluded
Total	> 50 m²	Sheltered place for permanent residence	N.A.

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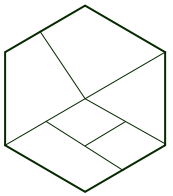

CENTRALBUILDING

PROGRAMOFREQUIREMENTS:ORPHANAGE

1.DININGAREAWITHOPENKITCHEN

Functional

- Capacity tailored to the maximum number of children + supervisors
- Logical separation between cooking, distribution and eating
- Direct relationship with outdoor space (ventilation & social control)
- 1.2–1.6 m per seat (tables/chairs + walking space)
- Open kitchen (incl. distribution) = 28–45 m (large)
- Dry storage/storage space: 6–12 m^2
- Dishwashing/cleaning zone: 4–10 m^2

Technical / architectural

- Floor: slip-resistant, water and grease resistant
- Walls: washable to at least 1.5 m height
- Good natural ventilation + extraction above cooking zone

Safety

- Open fire shielded
- No sharp corners
- Fire-resistant finish around cooking area

2.MEETINGROOM

Functional

- Suitable for staff consultation, external partners and meetings
- Flexible to set up (movable furniture)

Acoustics

- Sound-absorbing ceilings/walls
- Limited sound transmission to adjacent rooms

Comfort

- Good daylight entry without glare
- Possibility of darkening (presentations)

Other

- 1.5–2.2 m per person (table arrangement)
- 3–6 m for cupboard/whiteboard/storage

3.PLAY-/CREATIVESPACE

Functional

- Space for playing, drawing, crafts and group activities
- Flexible layout (open floor space)

Architectural

- Durable floor (shock-absorbing if possible)
- Walls suitable for creative use (e.g. pin/writing walls)

Safety

- Non-toxic materials
- Good visibility for supervision (no blind spots)

PROGRAMMEOFREQUIREMENTS:WEESHUIS

4.LOUNGE/RELAXATIONAREA

Functional

- Quiet space for relaxation, conversation and informal gathering
- Visual relationship with the outside (feeling of safety and openness)
- 1.0–1.6 m per user (sitting/relaxing)
- 2–6 m for cupboard/small bar/board games

Comfort

- Soft acoustics
- Protection against direct sunlight
- Good natural ventilation

Atmosphere

- Warm, homely appearance
- Use of natural materials where possible

5.LIBRARY

Functional

- Storage and reading space for books
- Silence function (concentration)
- Reading/quiet zone: 1.2–2.0 m per reader
- Book storage: 0.12–0.20 m per linear meter of bookcase (rough, incl. reach)

Architectural

- Protection against moisture and direct sunlight
- Good ventilation without drafts

Acoustics

- Sound-absorbing ceiling
- Shielded from play and dining areas

6.STUDY/PC-ROOM

Functional

- Workplaces for individual and group learning
- Sufficient sockets and data points
- Workplaces (tables): 1.8–2.5 m per study place
- PC places: 2.5–3.5 m per pc place (incl. chair space/walking space)
- Printer room: 3–8 m^2

Technical

- Good natural lighting + artificial light (no glare)
- Secured electrical installation (childproof)

Climate & comfort

- Limiting heat build-up (sun protection, ventilation)
- Quiet environment, acoustically separated

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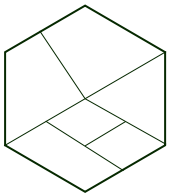

CENTRAL BUILDING

PROGRAM OF REQUIREMENTS: ORPHANAGE

OVERARCHING REQUIREMENTS (FOR ALL SPACES)

- Robust, low-maintenance materials
- Social safety: clear layout
- Accessibility: threshold-free where possible
- Flexibility: spaces adaptable in the future

FUNCTIONAL PROGRAM (PER SPACE)

Space	Surface	Function
Dining area with open kitchen	110.97 m²	Central place for eating, drinking, relaxation and social interaction and space for events Open kitchen: Preparing, cooking and storing food.
Meeting room	68.67 m²	A professional environment for collaboration, communication and decision-making, by facilitating team discussions, brainstorming sessions, information sharing, and receiving clients.
Play/Creative space	102.07 m²	Play area: Stimulating the physical and mental development of children and providing a place for meeting and community building for young and old. Creative space: Stimulating ideas, innovation and collaboration.
Lounge/Relaxation area	32.67 m²	A luxurious space where people can rest, wait, work, socialize or retreat.
Library	35.27 m²	Providing access to knowledge and information, stimulating reading and lifelong learning and personal development and facilitating digital skills.
Study/PC room	68.77 m²	Providing a quiet, organized and distraction-free environment, essential for concentration, efficient learning and academic success.