

INCLUSIVE TVET DESIGN AND PLANNING- CHECKLIST AND RATING SYSTEM

BARRIER FREE DEVELOPMENT KEY PERFORMANCE INDICATORS (BD-KPI)

Project Name: Insert Name of the Project here
Date: Date of Assessment

Community/Project Scorecard

EXTERIOR AREAS

| APPROACHABILITY-GET THERE (15%) | | 34 Points Possible |
|--|---|--------------------|
| Access, Infrastructure, Outdoor Facilities | | 28 Points Possible |
| Prereq 1 | Minimum width of sidewalks (150 cm) | Required |
| Credit 1 | Threshold free, main access steps, level difference bridged with ramp (151 cm?) | 2 |
| Credit 2 | Max. width and length of ramps (1.015 - 1,10 m / 9 m) | 2 |
| Credit 3 | Inclination of ramps (1:15 better 1:18) | 2 |
| Credit 4 | Depth platform required in front of the ramp (1,67 x1,67 m) | 2 |
| Credit 5 | Handrails with wheel defectors on both sides on stair or ramp | 4 |
| Credit 6 | Firm and level surface of the access area. Flooring: hard, non-slip, no gravel | 1 |
| Credit 7 | The usability of sports and play equipment in the outdoor facilities must be | 2 |
| Credit 8 | Usability in a seated and standing position | 1 |
| Credit 9 | Hear, see, touch - through acoustics, lighting and tactile information | 1 |
| Credit 10 | High-contrast design among surfaces such as floor doors and openings, walls and ceiling | 1 |
| Credit 11 | Use lighting fixtures for orientation and guidance | 2 |
| Credit 12 | Tactilely detectable floor structures | 2 |
| Credit 13 | Usability of the sports and playground equipment in the outdoor facilities | 2 |
| Credit 14 | Effective Way Finding System at Acceptable heights and the Glare | 2 |
| Credit 15 | Well demarcated access route with guides at end such as kerbs | 1 |

| Barrier Free Parking Lot | | 6 Points Possible |
|--------------------------|---|-------------------|
| Prereq 1 | Walkable Streets | Required |
| Prereq 2 | Non-Physically Separated Pedestrian Lanes allowed? | Required |
| Credit 1 | Ratio of accessible parking spaces (3,66 x 5,385 m) to normal parking spaces (1:25) | 2 |
| Credit 2 | Location: maximum recommended distance to building entrance (30 m) | 2 |
| Credit 3 | Flooring: level, hard, unavailability slope max 5%, and with accessible parking signage | 2 |

| FINDABILITY-GET INFORMED (10%) | | 26 Points Possible |
|--|--|--------------------|
| Access, Infrastructure, Outdoor Facilities | | 26 Points Possible |
| Prereq 1 | Main access steps, level difference bridged with ramp (same in the line?) | Required |
| Credit 1 | Minimum width (91,5 cm) | 2 |
| Credit 2 | Preferred variant is automatic door | 2 |
| Credit 3 | Lower door steps and thresholds are not allowed (max. 13 mm) | 2 |
| Credit 4 | Height of handrails and/or pushbuttons (85,5 - 96,5 cm) | 2 |
| Credit 5 | Turn handles are suitable (preferred lever type hardware) | 3 |
| Credit 6 | Required maneuvering clearance in front of doors (from front 1,22 m, side 1,065 m) | 2 |
| Credit 7 | Revolving and swinging doors should have alternative door access type | 2 |
| Credit 8 | Main access steps, level difference bridged with accessible ramp | 1 |
| Credit 9 | Alternative ramps or stair lifts provided for change in levels or floors | 1 |
| Credit 10 | Clearly perceptible, easy to open and close, safe to pass entrance | 1 |
| Credit 11 | Illuminated entrance, lift and door forcecoats | 1 |
| Credit 12 | Distinguish doors and door frames in a contrasting way | 1 |
| Credit 13 | Glass fronts are clearly marked with warning sign and directions | 1 |
| Credit 14 | Doorbell and intercom systems according to the two-senses principle | 1 |
| Credit 15 | Carefully placed dirt trap, floor drains and no loose floor mats | 1 |
| Credit 16 | Good signage with tactile info of rooms, lift and toilet facilities | 2 |

INDOOR AREAS

| ACCESSIBILITY-GET IN - HORIZONTAL (15%) | | 62 Points Possible |
|---|--|--------------------|
| Entrances | | 12 Points Possible |
| Prereq 1 | Minimum width of sidewalks (1,50 cm) | Required |
| Credit 1 | Orientation aids recognizable from the wheelchair | 2 |
| Credit 2 | Equipment elements must not extend into required movement areas | 2 |
| Credit 3 | Threshold free, max. level differences up to 13mm | 1 |
| Credit 4 | High-contrast design | 1 |
| Credit 5 | Orientation aids visually and acoustically perceptible (if possible tactile perceptible) | 2 |
| Credit 6 | Inductive hearing system | 2 |
| Credit 7 | Equipment elements must be designed with high visual contrast | 2 |

| Door / Doorways | | 21 Points Possible |
|-----------------|--|--------------------|
| Prereq 1 | Minimum width of all doors to and in the rooms (91,5 cm) | Required |
| Credit 1 | Minimum clear aisle width (1,10m low use areas / 1,20 m) / turning space 1,60x1,60m all 30 m | 2 |
| Credit 2 | Height of door handle (9,845 - 1,22 m) | 2 |
| Credit 3 | Required movement areas in front of doors (1,50 m door outward / 1,20 m inward swing) | 2 |
| Credit 4 | Wing door: Clear space next to the door area (60 cm towards, 30 cm away from person) | 2 |
| Credit 5 | Height for the arrangement of door signage (1,15 - 152,5 m) | 2 |
| Credit 6 | Doors are easy to find with high-contrast design | 1 |
| Credit 7 | High-contrast design concept as orientation aid | 2 |
| Credit 8 | Orientation aids visually and acoustically perceptible | 2 |
| Credit 9 | Door signage adapted to the age groups to be used | 2 |
| Credit 10 | Opening force for interior doors: max. (22 N) | 2 |
| Credit 11 | Anti-pinch protection for all doors | 2 |

| Interior Routes- Horizontal Access (Guided Pathways) | | 6 Points Possible |
|--|--|-------------------|
| Prereq 1 | Main connections: high-contrast and tactile highlighting | Required |
| Credit 1 | Orientation aids recognizable from the wheelchair | 3 |
| Credit 2 | Orientation aids visually and acoustically perceptible (2-sense principle) | 3 |
| Credit 3 | Well illuminated and glare-free | 2 |

| Corridors / Passageways | | 13 Points Possible |
|-------------------------|--|--------------------|
| Prereq 1 | Orientation aids recognizable from the wheelchair | Required |
| Credit 1 | Minimum width 1,20 m, turning space 1,60 x 1,60 m at every 20 m | 2 |
| Credit 2 | Alternative width in high public areas: 1,475 - 2,0 m | 2 |
| Credit 3 | Minimum width for clear aisles or passages, low use areas (1,10 m) | 1 |
| Credit 4 | Orientation aids visually and acoustically perceptible | 1 |
| Credit 5 | Bright and glare-free | 2 |
| Credit 6 | Flexibility of passages through high-contrast design (material and colour) | 2 |
| Credit 7 | should be clear of protruding objects like wall hangings and air conditioner units | 2 |
| Credit 8 | Tactile floor coverings (material and color) | 2 |

| Windows | | 10 Points Possible |
|----------|---|--------------------|
| Prereq 1 | Easy to be closed by Wheel Chair user (max 1,37 cm) | Required |
| Credit 1 | Easy to handle (1,20 m) | 2 |
| Credit 2 | Max Gripping height for window handles (1,065 m) | 2 |
| Credit 3 | max. height of sill from the floor (76 cm) | 1 |
| Credit 4 | Easy to close and open | 1 |
| Credit 5 | No dazzling windows at the end of the corridor | 2 |
| Credit 6 | High-contrast design | 2 |

| SECURITY- GET OUT (15%) | | 17 Points Possible |
|--------------------------------|--|--------------------|
| Emergency Concepts and Systems | | 10Points Possible |
| Prereq 1 | A fire protection / Emergency concept is to be developed right at the beginning of the planning phase that consider people with mobil and sensory restrictions | Required |
| Credit 1 | Emergency call system can be operated from the WC and while lying down | 3 |
| Credit 2 | Installation of the emergency call system in the lift can be perceived acoustically and visually | 3 |
| Credit 3 | Uniform, matt and glare-free lighting and finish of all surfaces | 2 |
| Credit 4 | Sufficient vertical and horizontal light level | 2 |

| Additional features | | 7 Points Possible |
|---------------------|---|-------------------|
| Prereq 1 | Design emergency call system to be visually contrasting, tactility detectable, easy to find | Required |
| Credit 1 | Deep of movement area in front of couch, security against unattended use | 2 |
| Credit 2 | Surface for couch with a height of 46 cm - 48 cm | 2 |
| Credit 3 | Door should open to the outside | 1 |
| Credit 4 | Movement area in front of sanitary objects (1,50 x 1,50 m) | 2 |

| SANITARY- GET IN AND OUT (10%) | | 22 Points Possible |
|---|--|--------------------|
| Barrier Free Restrooms and Sanitary Wares | | 22 Points Possible |
| Prereq 1 | Number of WC facility on floors at least 1 wheelchair-accessible 1 WC | Required |
| Credit 1 | for small facilities one centrally located wheelchair-accessible WC, | 3 |
| Credit 2 | There must be one barrier-free toilet for wheelchair users per sanitary facility | 3 |
| Credit 3 | min. Room size (1,65 x 1,80 m) | 3 |
| Credit 4 | Door opening to the outside (min. width 91,5cm) | 3 |
| Credit 5 | Movement areas in front of sanitary objects „Movement areas may overlap (1,50 x1, 50 m) | 3 |
| Credit 6 | Support and grab rails placed at standard heights | 3 |
| Credit 7 | Pre-wall installations to be provided with reinforcements, height-adjustable washbasins and toilets, and various support and grab rails at the toilet, washbasin and the shower area | 3 |
| Credit 8 | Anti-slip floor tiles | 2 |
| Credit 9 | Tactile on wall surfaces for easy identification of objects in the room | 2 |

Max. Interior Points 267 points
Max. Exterior Points 60 points

| ACCESSIBILITY-GET IN - VERTICAL (10%) | | 61 Points Possible |
|---------------------------------------|---|--------------------|
| Stairs | | 17 Points Possible |
| Prereq 1 | Stairs are no Barrier-free Access, unless fitted with lift platform | Required |
| Credit 1 | Height of continuous handrails, possibly on both sides (86,5 cm) | 1 |
| Credit 2 | Lead handrail at least 30 cm beyond entrance and exit | 2 |
| Credit 3 | Gradient ratio (18/26) | 2 |
| Credit 4 | Threads should have non-slip material finish | 2 |
| Credit 5 | Max. setbacks, stairs (20 cm) | 1 |
| Credit 6 | Slope ratio (18/28), intermediate landing for stairs with more than (10) steps | 2 |
| Credit 7 | Mark all threshold front edges with high contrast | 2 |
| Credit 8 | Illuminate well and evenly (100 lux.) | 2 |
| Credit 9 | Floor structure in front of stairs can be detected visually and tactility (76 cm) | 2 |

| Ramps | | 11 Points Possible |
|----------|--|--------------------|
| Prereq 1 | Ramps are designed to meet accessible standards with preferred gradient of 1:15 | Required |
| Credit 1 | Width of ramps, with handrails at both sides (1,015 -1,50m) | 2 |
| Credit 2 | non slip floor, with tactile floor mounted at beginning and end of each flight | 2 |
| Credit 3 | min. depth x width of intermediate level landing of ramps (1,475 x 1,475 m) | 2 |
| Credit 4 | Height of recommended slip-resistant kerbs or solid barrier on either side (5 cm) | 2 |
| Credit 5 | Mounting height of handrails on ramps (86,5-96,5 cm) | 1 |
| Credit 6 | The handrail should be smooth and continuous from the beginning to the end of the ramp | 1 |
| Credit 7 | min. extension of handrail beyond the top and bottom of the ramps (30 cm) | 1 |

| Elevators and Lifts | | 16 Points Possible |
|---------------------|--|--------------------|
| Prereq 1 | Elevator must comply with the recent Ghana accessibility standards for built environment | Required |
| Credit 1 | Manoeuvring area in front of the lift should (167,5 x 1,675 m) | 2 |
| Credit 2 | Min. size of at least one elevator to accommodate a trolley (1,725 x 2,285 m) | 2 |
| Credit 3 | Recommended access width (minimum clear width 91,5 cm) | 2 |
| Credit 4 | Asial height of the horizontal control panel (76 cm) | 2 |
| Credit 5 | Extended door opening times (20 sec) | 1 |
| Credit 6 | Height of light barriers (76cm), and a rear mirror inside lift | 1 |
| Credit 7 | Select access control panel , has high-contrast design of the control panel | 1 |
| Credit 8 | Control panel tactile detectable, with buttons instead of touch panel | 1 |
| Credit 9 | Emergency call actuation is also optical | 1 |
| Credit 10 | hand rails is present at both the rear and sides of the lift car | 1 |
| Credit 11 | there is a live attendant within reach when needed | 1 |

| GET IN , GET OUT | | 17 Points Possible |
|---------------------------------|--|--------------------|
| Staff and Student accommodation | | 17 Points Possible |
| Prereq 1 | There is accessible accommodation in bungalows and dormitories for pwds on campus | Required |
| Credit 1 | staff accommodation for pwds in bungalows generally meets accessible standards | 3 |
| Credit 2 | dormitory blocks should at least have accessible rooms for students with impairment | 2 |
| Credit 3 | should have accessible entrance and rooms located close to it | 2 |
| Credit 4 | room spaces should be fitted with accessible washroom or accessible washroom close by | 2 |
| Credit 5 | corridors in dormitories wide and safe for movement of vision and mobility impaired students | 2 |
| Credit 6 | no threshold at door, with width at 91,5cm and window sill at 76cm height | 2 |
| Credit 7 | emergency call button installed in room | 2 |
| Credit 8 | installed switches and sockets should be within reach of impaired students | 2 |

| USABILITY - GET ALONG (10%) | | 35 Points Possible |
|--|--|--------------------|
| Interior Amenities (Lighting Concepts) | | 7 Points Possible |
| Prereq 1 | An environment that is visually adapted supports well-being and safety | Required |
| Credit 1 | Uniform, matt and glare-free lighting and finish of all surfaces | 1 |
| Credit 2 | Sufficient vertical and horizontal light levels | 2 |
| Credit 3 | Use of High-contrast and adequate colours | 2 |
| Credit 4 | Refer to chapter 8.2 IBA Principles - Visuality | 2 |

| Interior Amenities (Acoustic Concepts) | | 7 Points Possible |
|--|--|-------------------|
| Prereq 1 | An environment that is acoustically adapted supports well-being and safety | Required |
| Credit 1 | Reduction of the noise level with 120dB limit | 1 |
| Credit 2 | Reduction of reverberation time | 2 |
| Credit 3 | Round attenuation | 2 |
| Credit 4 | Refer to 8.3 IBA Principles - Audibility | 2 |

| Interior Systems and Controls | | 21 Points Possible |
|-------------------------------|--|--------------------|
| Prereq 1 | Information must also be accessible and legible for wheelchair users | Required |
| Credit 1 | in front of operating devices movement area | 2 |
| Credit 2 | Lockers, telephone, etc. accessible from at least one side with a wheelchair | 2 |
| Credit 3 | Movement area for lateral approach (1,20 x 1,50 m) | 2 |
| Credit 4 | Necessary lateral distance must be to doors or control panels (> 60 cm) | 2 |
| Credit 5 | Gripping height (< 86,5cm) | 2 |
| Credit 6 | Minimum width of self-service units (angled or long units need 1.00 m) | 2 |
| Credit 7 | Maximum force for operation of switches and push-buttons (2,5x x 5,0 N) | 2 |
| Credit 8 | High-contrast operating elements based on the two-senses principle design | 1 |
| Credit 9 | Recognition effect for the same operation | 2 |
| Credit 10 | Function triggering must be clearly signaled | 2 |
| Credit 11 | Force for operating switches and pushbuttons (< 2.5 to 5,0 N) | 2 |

| SPECIAL FACILITIES AND AREAS (25%) | | 70Points Possible |
|-------------------------------------|--|--------------------|
| Classrooms/ Laboratories/ Workshops | | 24 Points Possible |
| Prereq 1 | Minimum width in between tables (1,20 m) | Required |
| Credit 1 | Provide movement areas for turning wheelchair users | 2 |
| Credit 2 | Tables should have enough space under for wheelchairs | 2 |
| Credit 3 | Minimum height to vary heights to suit anthropometric needs | 1 |
| Credit 4 | Cabinets should have sliding doors instead of swing doors | 2 |
| Credit 5 | Low parapet heights allow a view in a seated position | 2 |
| Credit 6 | Assistive aids for barrier-free reception on information to various zones and spaces | 1 |
| Credit 7 | Seating, touching in the equipment - through acoustics, lighting and tactile information | 2 |
| Credit 8 | High-contrast design with high luminance | 2 |
| Credit 9 | Short reverberation time and low total noise level pay attention (recommended 35 dB) | 2 |
| Credit 10 | Possibly arrangement of insulation in the ceiling and back wall area | 2 |
| Credit 11 | Variable tables and chairs with seating arrangement to ensure visual contact | 2 |
| Credit 12 | Cabinets with sliding doors are preferred to swing doors | 2 |
| Credit 13 | Accessible use of computers must be ensured by means of suitable hardware and software | 2 |

| Canteen, Cafeteria, Libraries, Reading Areas and Open Learning Areas | | 19 Points Possible |
|--|--|--------------------|
| Prereq 1 | Alternative: step-free diversions with lifting platform, stair lift, lift (old building) | Required |
| Credit 1 | Accessibility, barrier free and threshold-less | 2 |
| Credit 2 | Min. width of main entrance (1,20 m) | 2 |
| Credit 3 | Min. clear width of access in front of a row for disabled people (90 cm, 1,20 m preferable) | 2 |
| Credit 4 | WC nearby (especially at the canteen and cafeteria) | 2 |
| Credit 5 | Hearing, seeing, touching in equipment - through acoustics, lighting and tactile information | 1 |
| Credit 6 | Glare-free lighting and illumination (200 lux) | 2 |
| Credit 7 | Room acoustic measures and Deaf space measures | 2 |
| Credit 8 | Door signage adapted to the age groups to be used | 2 |
| Credit 9 | Installation of an acoustic amplification system | 2 |
| Credit 10 | Display panels should support the amplification system | 2 |

| Sports, Gymnasiums, Changing Rooms and Audience Areas | | 14 Points Possible |
|---|---|--------------------|
| Prereq 1 | Ensure barrier-free usability | Required |
| Credit 1 | Barrier-free access, the usability of sports and play equipment must be pay attention to usability in a seated position | 1 |
| Credit 2 | Observe standing and movement area for wheelchair spaces (90cm x 1,40 m) | 1 |
| Credit 3 | Provide seating for persons accompanying wheelchair users in the immediate vicinity | 1 |
| Credit 4 | For rooms with seating in rows and frontal access, provide standing areas for wheelchair users | 2 |
| Credit 5 | For rooms with seating in rows and frontal access, provide standing areas for wheelchair users for side approach | 2 |
| Credit 6 | Hearing, seeing, touching in equipment - through acoustics, lighting and tactile information | 1 |
| Credit 7 | Glare-free lighting and illumination | 2 |
| Credit 8 | Installation of an acoustic amplification system | 2 |
| Credit 9 | Display panels should support the amplification system | 2 |

| Retreat Rooms for Pupils with Special Educational Needs | | 13 Points Possible |
|---|--|--------------------|
| Prereq 1 | Movement areas (1, 50 m x1,50 m) and trained assistant present at all times | Required |
| Credit 1 | Movement areas in front of furniture (1,50m x1,50m) | 2 |
| Credit 2 | Tables that wheelchairs can slide under (clear knee space 70 cm) | 2 |
| Credit 3 | Hearing, seeing, touching in the equipment - through acoustics, lighting and tactile information | 1 |
| Credit 4 | High-contrast design with high luminance | 2 |
| Credit 5 | Variable tables and chairs | 2 |
| Credit 6 | Deep of movement areas in front of furniture | 2 |
| Credit 7 | TV set with teletext decoder | 2 |

Project Totals (Certification estimate) **330 Points**
One Star = 140-169 points, 2 Stars = 170-209 points, 3 Stars = 210-259 points, 4 Stars = 260+ points