PAB

CYBERJAYA HOSPITAL

Malaysia's first GBI Platinum public healthcare facility — integrating salutogenic architecture with sustainable design.

288
Inpatient beds

79,206M²
Gross Floor Area

RM 508.8M
Development Cost

PLATINUM
GBI Certified 25 May 2023

Location: Persiaran Multimedia, Cyber 11, Cyberjaya, Malaysia
Client: Cyberview Sdn Bhd / MOH Malaysia
Architect: PAB Architecture Sdn Bhd




PRIME MINISTER'S DEPARTMENT
ENDOCRINE INSTITUTE
NATIONAL CANCER INSTITUTE
CYBERJAYA HOSPITAL
CYBERJAYA
PUTRAJAYA
PAB

A Salutogenic Vision

A Framework

Green Building Index (GBI) Hospital Tool

- **Energy Efficiency, Indoor Environmental Quality, Sustainable Site Planning & Management, Materials & Resources, Water Efficiency, and Innovation**.

Vision:

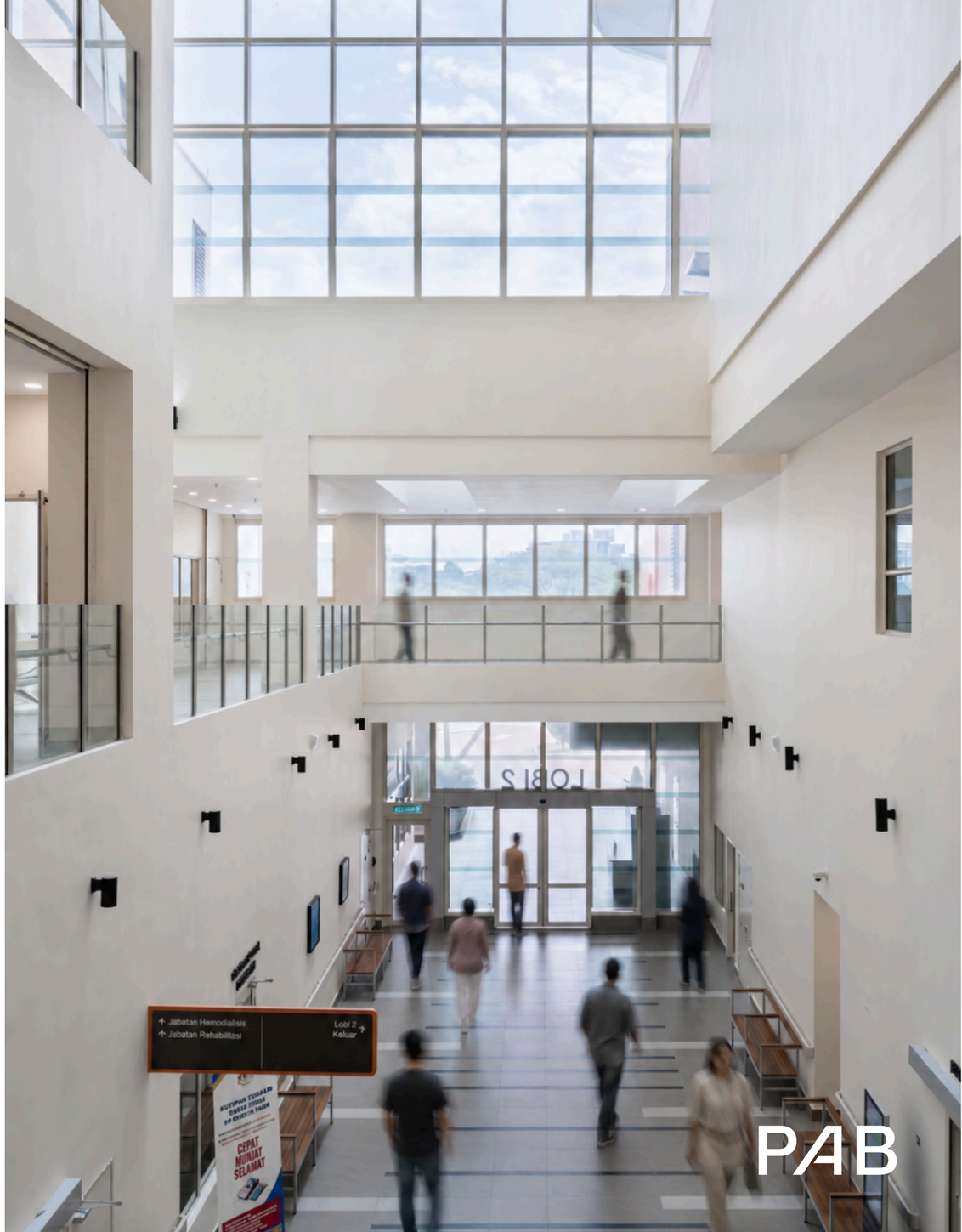
- **Visually memorable, cheerful**, and **bright landmark**
- **Healing architecture**
- **Future-centric healthcare**
- **Well-being of patients, staff and visitors**

Sense of Coherence:

- **Comprehensibility (the atrium as a legible cognitive anchor)**
- **Manageability (individual environmental control at every bed)**,
- **Meaningfulness (daylight, colour, and art)**

Preventative & Wellness Features:

- **Ultraviolet Germicidal Irradiation (UVGI)-treated air**
- **Daylight-led circadian support**
- **Biophilic access to gardens and views**,
- **Reducing physiological stress before illness, not only after it.**



Clarity in Ideas, Scale & Positive Stimulation

Clarity of ideas — medical planning:

- Hospital streets intersect at the central atrium
- Central atrium naturally ventilated, and filled with light

Scale & integration:

- Synergistic planning, not piecemeal compliance.
- Medical brief, structural and services engineering, and GBI's six criteria integrated in design solution.

Positive stimulation:

- Natural light and views to landscaped greenery
- Light to reach deep into the plan
- Cheerful, department-coded colour palette
- Curated artwork punctuates circulation routes












WAD 7A
PEDIATRIK


PAB


WAD 5A
OBSTETRIK & GINEKOLOGI


MAVIC
Aquilion
Canon
PAB

Supportive Design Features

Landmark & Image

A **naturally lit, 4-storey atrium** anchors the plan — a visual compass reached via a smooth arrival sequence from shaded exterior drop-off. Bright **orange facade** create a **striking visual landmark** along Persiaran Multimedia, the township's major arterial road.

Light Shelves & Daylight Harvesting:

Reflected daylight from lightshelves reach 9m into the floor plates — Energy Efficiency (reduced lighting/cooling load) and Indoor Environmental Quality (31% of NLA daylit without glare).

High-performance Envelope:

Wards are **North-South oriented**; **double-glazed Low-E glass** and **insulated walls** hold **OTTV to 39.33 W/m²**, **21.3%** better than MS1525; **glare-prevention blinds** protect visual comfort at every bed.

UVGI-treated Air:

Ultraviolet Germicidal Irradiation (UVGI) in the air-handling units, paired with CO_2-modulated fresh air — Indoor Environmental Quality, verified through **IAQ monitoring before and during occupancy.**



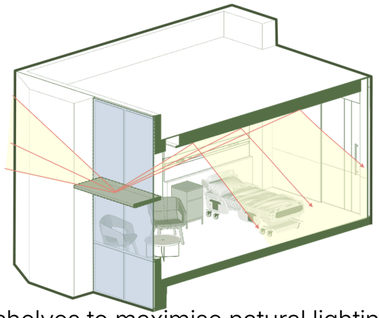
View of hospital atrium



Porte-cochere



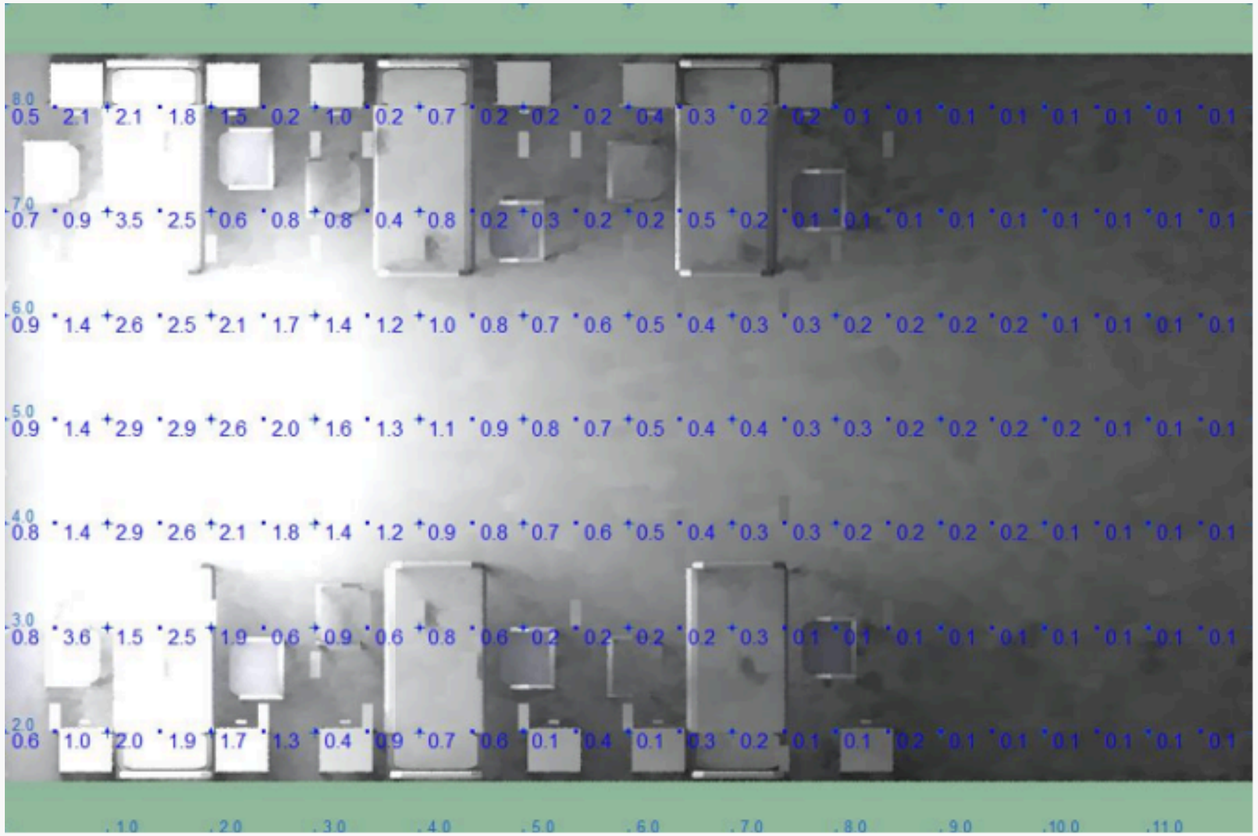
External view of light-shelves



Light-shelves to maximise natural lighting internally



Internal view of naturally lit ward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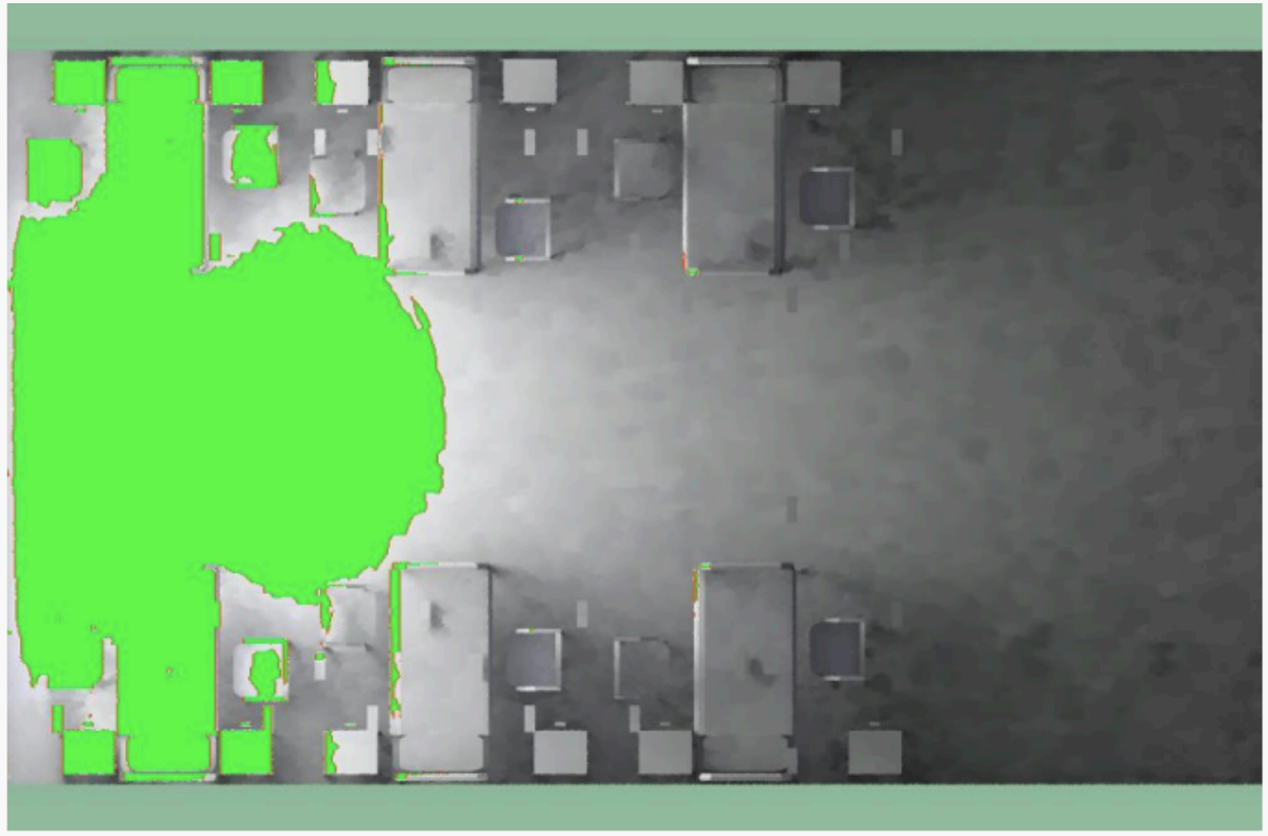

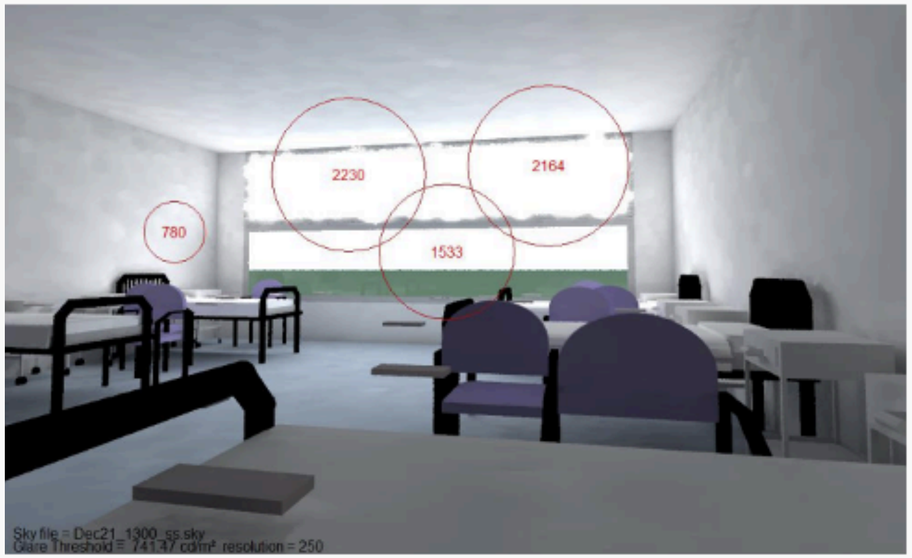
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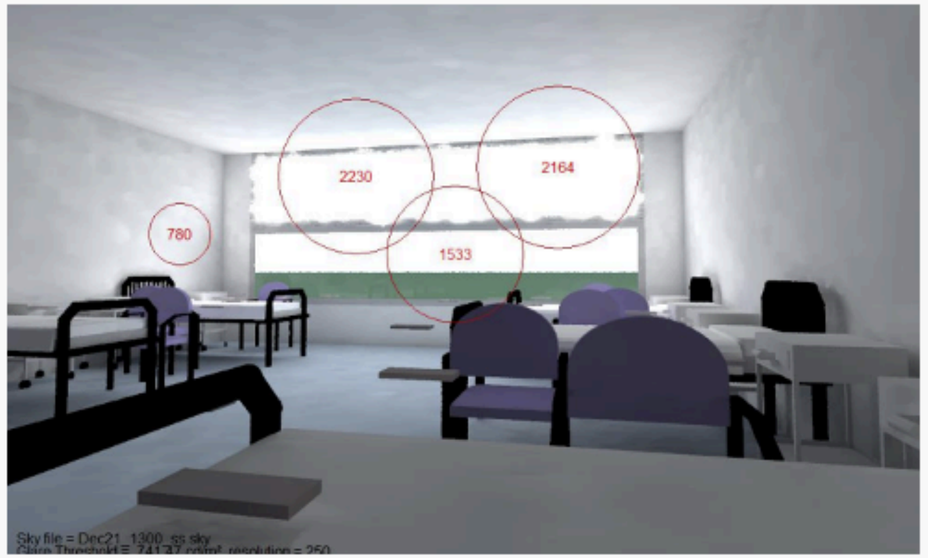
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Masterlegal
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Clinical Flow, Wayfinding & Patient Safety

Core services: a **288-bed** delivers **14 clinical specialties** — emergency, general medicine, general surgery, O&G, paediatrics, orthopaedics, anaesthesiology, ophthalmology, ENT, radiology, pathology, psychiatry & mental health, rehabilitation, and dentistry.

Circulation Segregation:

Public visitor routes, patient-transport routes, and back-of-house staff/service lifelines are **strictly decoupled**, keeping **stretcher movement** and **emergency transfers out of public zones.**

Zoned Emergency Access:

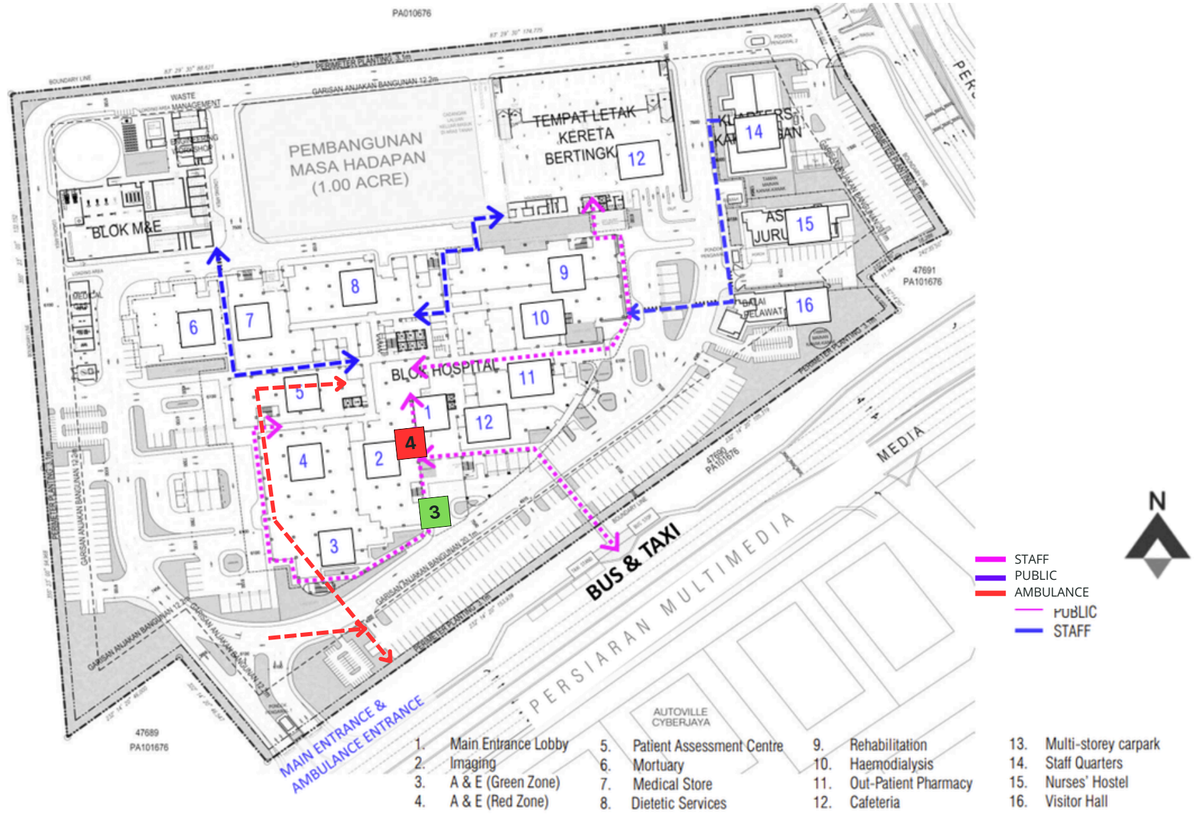
A&E is **split into Green and Red Zones** adjoining the main entrance, streamlining triage and arrival for the highest-acuity patients.

Infection Control:

Ultraviolet Germicidal Irradiation (UVGI) in the air-handling units, paired with CO_2-modulated fresh-air intake, **reduces airborne-pathogen risk** throughout.

Intuitive wayfinding:

A **single naturally-lit central spine** and consistent sightlines **reduce reliance** on **directional signage** for first-time visitors.



Ground floor plan — magenta: public circulation · blue: staff circulation

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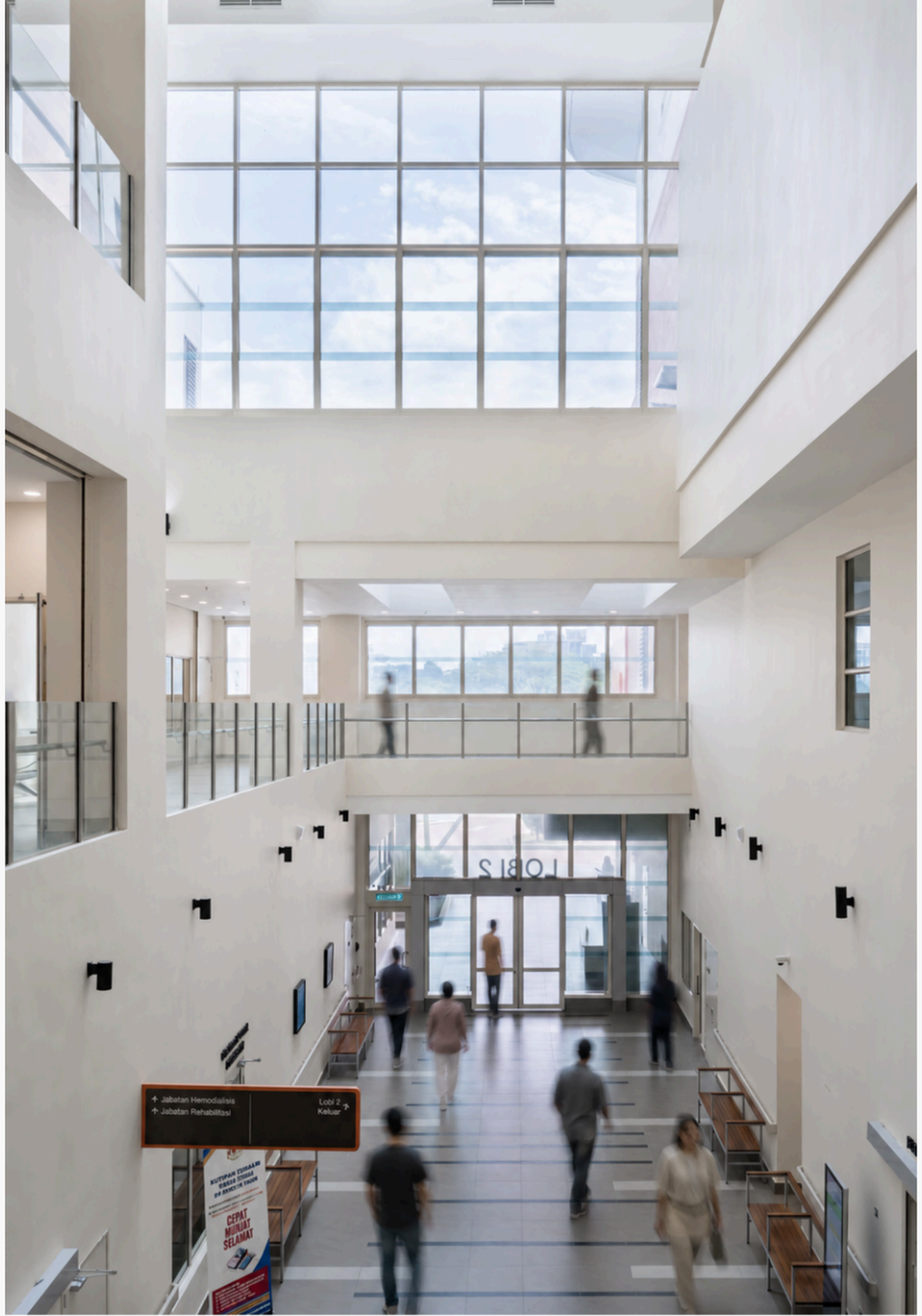
Jabatan Hemodialisis
Jabatan Rehabilitasi
Lobi 2
Keluar
CEPAT
MURAH
SELAMAT


HOSPITAL CYBERJAYA

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4
FISIOTERAPI


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KLINIK PAKAR
CEPAT
MUDAH
SELAMAT

Community Access & Ongoing Engagement

Low-carbon Access:

A **dedicated RapidKL feeder bus stop** sits directly **opposite the main entrance**, serviced from MRT Cyberjaya Utara — removing transit barriers for elderly and lower-income patients.

Preventive Care & Community Education:

A Level 4 **CME auditorium** and **seminar rooms** give the hospital dedicated infrastructure to host the community health-screening, vaccination and education programmes Malaysian MOH facilities routinely run.

Civic Outreach:

The **central atrium** doubles as a venue for outreach programmes — **turning a circulation space into a site of civic engagement.**

Cost-effective Public Healthcare:

Delivered for RM 508.8 million (≈ USD 125 million) / USD 432,000 per bed and USD 146 per sq ft, at or below the low end of typical international hospital benchmarks (USD 500,000–1.5 million per bed; USD 430–800 per sq ft, US 2026 data).





Site Context & Location

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SELAMAT DATANG
WELCOME
HIS EXCELLENCY MR. NIKLAS WIBERG
Ambassador of Sweden to Malaysia
HOSPITAL CYBERJAYA
JABATAN RADIOLOGI

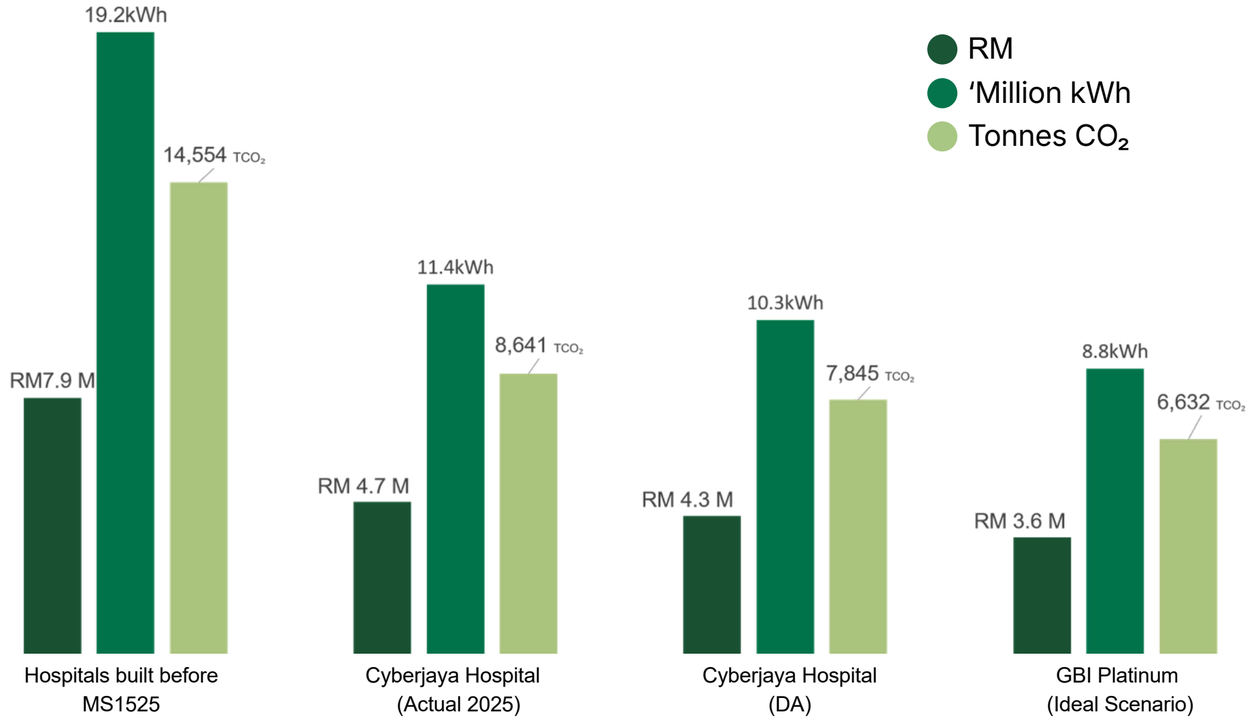
AJ Architects' Journal

Architects have '196 times' more power to cut carbon through work than lifestyles

12 MARCH 2024 • BY ANNA HIGHFIELD

Delivery & Verified Performance

Built using **Industrialised Building System (IBS); Variable Air Volume (VAV)** zoning gives **100% of patient rooms individual thermal control**; an **integrated digital metering system** feeds the Building Management System for real-time monitoring. Verified under **GBI's Completion & Verification Assessment (CVA)**, against the design brief:



Energy: -41% to -54% vs. baseline hospitals — RM3.2–4.3M saved per year

54.4%

Reduction in potable water consumption (fittings)

Zero potable water used for landscape irrigation

82.7%

Construction waste diverted from landfill

Via recycling, verified against contractor's monthly GBI report

76%

QLASSIC construction quality score (CIDB)

Exceeds GBI's 70% minimum threshold

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Energy, Water & Natural Ventilation

158.94
kWh/m²/yr
5-star Building Energy Index (BEI), a 67% reduction against the Malaysian public-hospital baseline of 483 kWh/m²/yr

217
kWp
Rooftop solar PV system, offsetting grid electricity consumption

39.33
W/m²
Overall Thermal Transfer Value (OTTV) — 21.3% better than MS1525

Water-efficient Fittings:

Dual-flush WCs and **low-flow fittings** across non-clinical areas cut potable water consumption by **54.42%** against baseline, verified by CVA (medical-use fittings excluded to protect care quality).

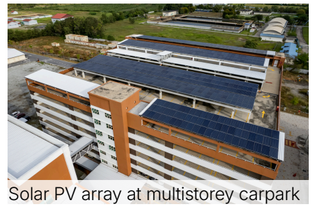
Zero-potable Irrigation:

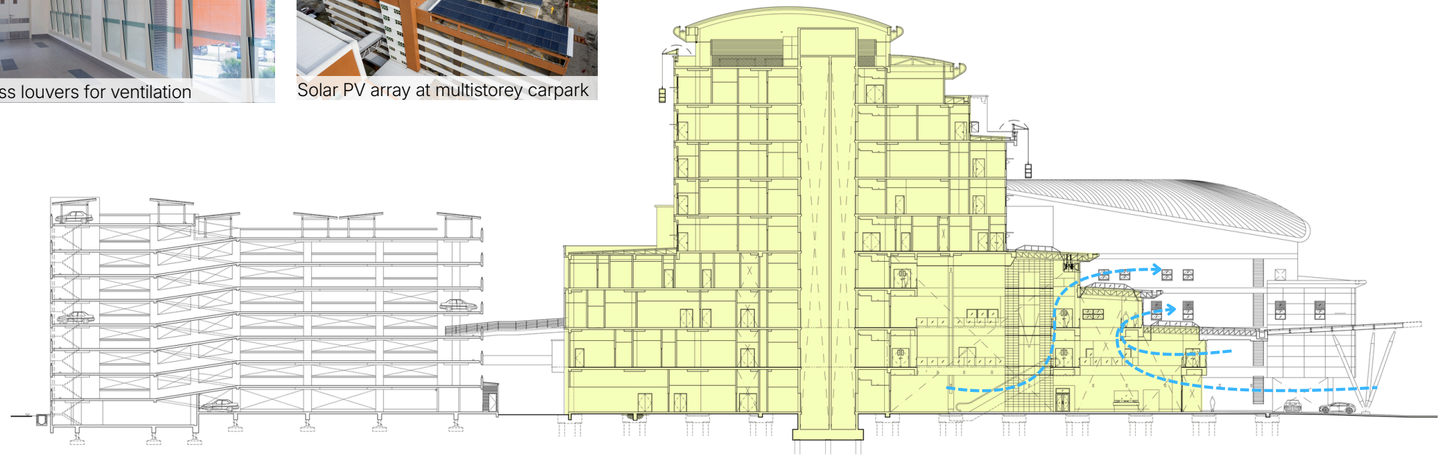
Harvested rainwater covers **161% of landscape irrigation demand** — no potable water is used for irrigation.

Metering & Leak Detection:

106 digital water sub-meters feed the Building Management System for real-time **consumption tracking and leak detection.**


Glass louvers for ventilation


Solar PV array at multistorey carpark



Initially resisted by MOH reviewers unconvinced that thermal comfort could be achieved through stack effect and air-conditioning spill from adjoining spaces alone — the naturally ventilated atrium is now used and celebrated by staff and visitors daily, a genuine passive-design success story for Malaysian public healthcare.

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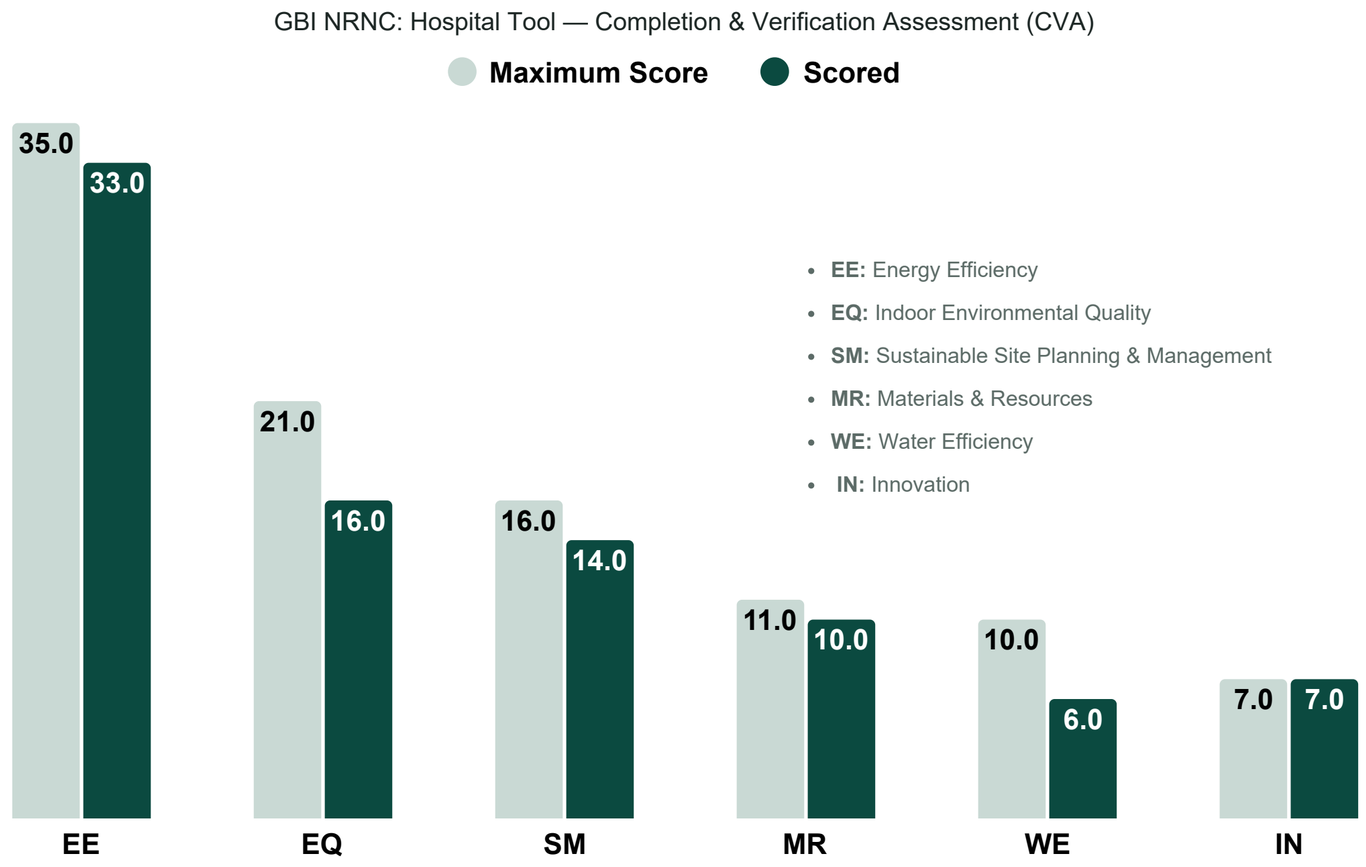
Materials, Waste & CVA-Verified Performance

Locally sourced / recycled materials:
Plasterboard, aluminium panels, green cement, and certified wood were prioritised to reduce embodied carbon.

83% construction waste diverted
from landfill via recycling.

Low-VOC Materials:
Strict VOC limits on paints and adhesives protect immunocompromised patients — a clinical-suitability standard beyond typical office fit-outs.

CVA Verification:
GBI certification is scored in two stages — Design Assessment (DA), based on design intent, and Completion & Verification Assessment (CVA), which requires documented, as-built evidence: energy performance verification, indoor air quality monitoring before and during occupancy, enhanced commissioning, and sustainable maintenance protocols. Cyberjaya Hospital's 86-point score is the CVA result.



***86 of 100 points**, **Platinum** — GBI's post-completion stage, scoring verified as-built and in-use performance rather than design intent alone, across six criteria:*

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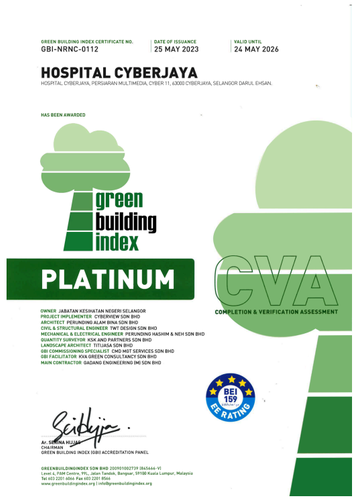
Certification, Recognition & Project Evidence


GREEN BUILDING INDEX CERTIFICATE NO. GBI-NRNC-0112
DATE OF ISSUANCE 25 MAY 2023
VALID UNTIL 24 MAY 2026

HOSPITAL CYBERJAYA

HOSPITAL CYBERJAYA, PERSIARAN MULTIMEDIA, CYBER 11, 63000 CYBERJAYA, SELANGOR DARUL EHSAN.

HAS BEEN AWARDED

green building index

PLATINUM

CVA

COMPLETION & VERIFICATION ASSESSMENT

OWNER: JABATAN KESIHATAN NEGERI SELANGOR
PROJECT IMPLEMENTER: CYBERNOW SDN BHD
ARCHITECT: PERUNDING ALAM BINA SDN BHD
CIVIL & STRUCTURAL ENGINEER: TWY DESIGN SDN BHD
MECHANICAL & ELECTRICAL ENGINEER: PERUNDING HASHIM & NEH SDN BHD
QUANTITY SURVEYOR: KGK AND PARTNERS SDN BHD
LANDSCAPE ARCHITECT: TITI LASA SDN BHD
GBI FACILITATOR: GREEN BUILDING INDEX SERVICES SDN BHD
GBI FACILITATOR: KIA GREEN CONSULTANCY SDN BHD
MAIN CONTRACTOR: GADANG ENGINEERING (M) SDN BHD

BEI 159 GBI RATING

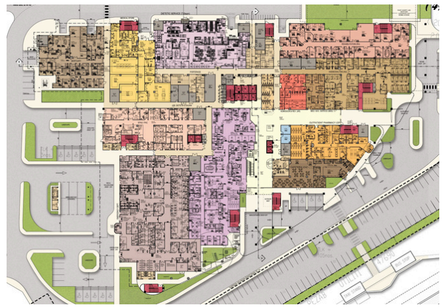
Chairman
GREEN BUILDING INDEX SDBD ACCREDITATION PANEL

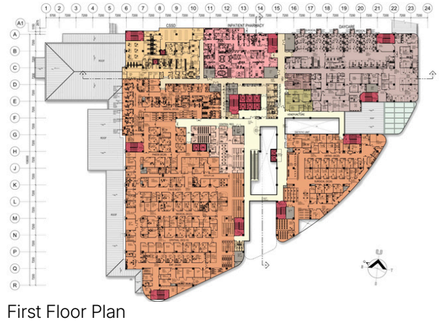
GREENBUILDINGINDEX SDN BHD 200901002719 (864444-V)
Level 6, PJAM Centre, 9PL, Jalan Tandok, Bangsar, 59100 Kuala Lumpur, Malaysia
Tel (60) 2201 6866 Fax (60) 2201 8966
www.greenbuildingindex.org | info@greenbuildingindex.org

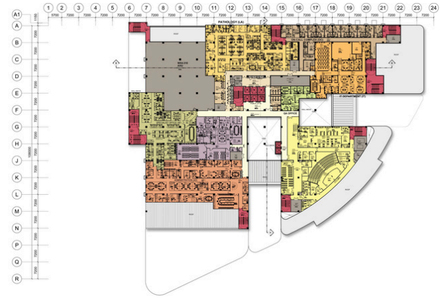
- ***GBI Hospital Tool:*** *the first, and only, Platinum-rated hospital in Malaysia (Cert. GBI-NRNC-0112).*

nea
NATIONAL ENERGY AWARDS

- ***National Energy Awards Malaysia 2026:***
  Winner, Large Green Building
  Winner, EE Designed Building.


Ground Floor Plan

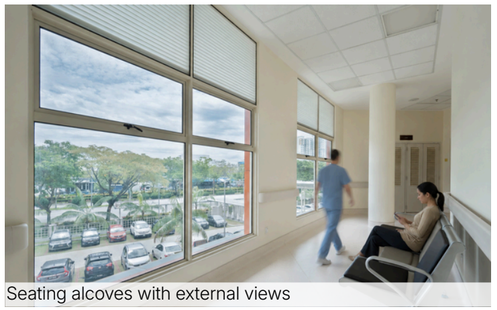

First Floor Plan


Third Floor Plan

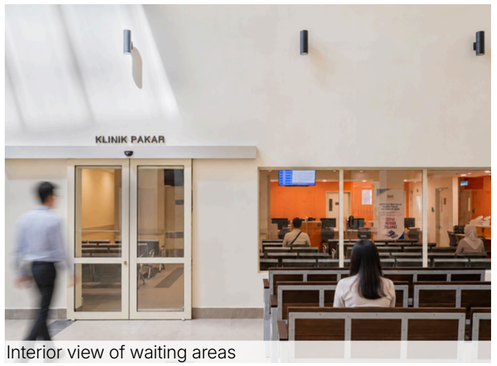


External side profile


Interior of atrium


Seating alcoves with external views


Interior view of the ICU



Interior view of waiting areas

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Natural Views & Relaxation:

Ward rooms offer direct views of greenery and the city skyline, creating a spacious, cozy, and relaxing space that fosters a stress-reducing environment for recovery.

Bright, Uplifting Atmosphere:

The interior is frequently praised for being bright and clean rather than "gloomy" like traditional public hospitals, providing a welcoming ambiance that relieves anxiety.

Private-Hospital Look and Feel:

Multiple patients remark that the building's new, elegant architecture makes it look and feel like a high-end private hospital.

Spacious & Well-Organized Layout:

Reviews consistently mention that the building is clean, sanitary, well-maintained, and logically organized.

Caregiver-Friendly Spaces:

Spatial planning incorporates dedicated areas for visitors, including generous waiting room seating and patient rooms equipped with convertible caregiver chairs/mattresses.

In-Room Facilities:

Individual ward rooms are designed for comfort and dignity, featuring controlled air conditioning and private en-suite toilets.

What users say about the building...

Google reviews

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