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# "Humanistic Expression of Hospital Space Design in Malaysia"

Presented by

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CHCC 2023-Humanistic Expression of Malaysian  
Hospital Space Design



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# Humanistic Expression of Hospital Space Design

## Abstract

Patient Centred Care, Human Centred Care, and Homeliness are among the approaches that Malaysian public healthcare facility professionals have advocated since the early 1990s towards making the public hospital environment acceptable to the populace and therefore get better health outcomes for the nation. The acts of humanisation, their approaches and definitions differ in many locations, although scholastically derived from the need to prevent too much dependence on technology and bring about the human touch as high touch in healthcare scenarios. This presentation review experiences qualitatively from the colonial period to the 2020s (60+ years) through project intent and selected case studies as design outcomes. The physical findings significantly showed that there are many changes in the design of the hospital spaces, particularly in the general patient areas such as wards and waiting areas with special areas for visitors with children; and for staff, the emergence of staff rest areas, staff amenities and others that make the hospital a place for a family gathering in support of the sick painlessly-through understanding the human culture and the clinical requirements. The findings concluded that the subtle introduction of what one may call 'humanistic designs', even from the early years, still takes some time for the public to accept as an honest intent in the public healthcare system. Stereotyping of public healthcare facilities as sterile and uncaring still prevail as long as the balance of services and facilities that 'touches' them individually, as the humane benchmark by the users, is impactful to their wellbeing.

- **Keywords:** *Humanistic, Space, Design, Healthcare, Hospital, Facilities.*



# WHO's Definition of Health

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

WHAT ABOUT US ASIAN's ? WHAT IS HEALTH?



# Outline of Presentation

- Theory of Humanistic and Which Version Malaysia Holds
- Methodology of enquiry/review
- Evolution of humanistic expression in Hospital Space Designs in Malaysia
- Case studies
- **Summary**

# Humanistic - Expression of Hospital Space Design

- Many studies have found that the clinical environment in hospitals is a traumatic experience with a psychological impact on both the patients' and staff's behaviour.
- The uprooting of patients from the day-to-day routine environment, i.e. from home, office or school environment to a hospitalised environment, is a drastic and upsetting change.
- With the many approaches to making a stay in a hospital bearable, this presentation presents reviews based on experiences qualitatively from the colonial period through to the 2020s (60+ years), from the project intent with selected case studies of designs as outcomes of how Malaysian evolved humanistic space designs to be as humane as possible.

# Methodology of Enquiry/Review- Qualitative

## SETTING THE BACKGROUND

Deciphering theory and exemplars on hospital space design approaches found in other parts of the world towards improved care or humane care in clinical settings were made through a literature review from publish and unpublish official sources

## SCOPE

In the absence of definite literature on the subject of the design intent of hospital space design in Malaysian healthcare architecture, **experiences and observations made** in the conduct of hospital design in the

- Public Works Department(PWD), Medical and Health Works Branch (now Cawangan Kesihatan/Health Branch) and
- Ministry of Health Malaysia, from 1979 to date, where possible, were scrutinised.

## SOURCES

- Literature,
- Papers published and unpublished (government sources)
- Post-occupancy evaluation (POE) visits and
- as practice in current hospital design.



# What is 'Humanistic'?

According to Oxford Languages, the term 'Humanistic' relates to or supports the principles of humanism or with "humanistic values", and being humanistic means " a person having a strong interest in or concern for human welfare, values, and dignity. a person devoted to or versed in the humanities" (Dictionary.com).

# What is 'Humanistic'?

**Humanistic**, or to be human, is not a new idea but is derived from concerns that humans were somewhat not focused or cared for in the technology-driven medicalised world.

Despite the many definitions and terminologies, this model of the 'human' for healthcare is culturally specific, with its focus on the individual and self-expression (Bates, V. (2018)),

According to Bates, the ideal hospital scale was thus *humanistic* on two levels:

- (i) It would give patients space and privacy within specific spaces, such as the ward, and
- (ii) it would be easy to navigate and familiar at an overall level.



# What does 'Humanised' mean in the design of spaces ?

"Humanisation" is defined by Merriam-Webster's online dictionary (2008) as a process to make something or space "humane".





# What does 'Humanised' mean in the design spaces ?

Encyclopaedia Britannica Online (2008), in its architectural article summary, brought about the need to understand the psychological spatial experience of user/users in a finite environment in relation to

- *human scale,*
- *human cognitive, and*
- *human experience,*
- *and interior or exterior space.*

For humans of various cultures and belief systems, humanisation also includes the **spiritual dimension** as well as the **accepted traditions** the users are accustomed to daily.

# Humanistic Values by Pellitteri, G., and Belvedere, F., (n.d.)

According to Pellitteri, G., and Belvedere, F., (n.d.) in their writings 'Characteristics of The Hospital Buildings: Changes, Processes and Quality' in Norwina Mohd Nawawi et al (2013) introduced the aspects of humanising in relation to the role hospitals plays within the city and the community. The role, which includes a recovery of values that are different from those of quantity and function characterised by modern hospitals in the first half of the twentieth century. These 'new values' recovered from the past agree to a humane and humanistic vision of reality, for which, together with the recent technological discoveries and new ways of treatment and care, influence the design choices in later hospitals.

# Humanistic Values by Pellitteri, G., and Belvedere, F., (n.d.)

The same article cited Architectural Psychology in the humanisation of physical space, where in the case of the hospital buildings, the attention should be focused first of all on the patient as a complete person, with his physical and emotional needs. The proposed research on the Architectural of hospital space: Changes and Design Methods by Pellitteri, G and Belvedere, F., mentioned in the above article, defines the features and the architectonic qualities of the contemporary hospital as a care centre and hub of scientific and medical knowledge which is also served as the important place for observations on the relationship between the man and the built environment.

# The Charter for Health Promotion (Ottawa, 1986),

The Charter for Health Promotion (Ottawa, 1986), specifies the need to "Create Supportive Environments", i.e. recognising the inextricable link between man and built environment. The process of humanisation involves a holistic vision of people, spaces and activities. Recognising the interactive processes that occur between a man and the environment, building the concept of humanisation means designing environments and spatial distributions in which the needs of the patient (sense of acceptance and familiarity, respect for privacy, space and sensory comfort, ease of orientation) are fulfilled destroying at the same time the factors of stress. The article provides ways through which one can implement a project of humanisation, such as through the distribution and composition of spaces, the shape of the exterior volume of the building, the presence of views outside, green (gardens) and worship spaces, furnishings, materials, finishes, colours, signage, light (both natural and artificial), elements of visual reference (for example, art installations).

# Florence Nightingale's

The humanistic approach was also discussed by Burpee, H., (2008), in her article 'History of Healthcare Architecture' from Integrated Design Lab Puget Sound, which informed that Florence Nightingale's passion for creating a better healing environment for patients prompted her to write Notes on Hospitals in 1863 outlining her priorities for designing hospitals.

Her approach to creating a healing environment for patients not only looked at the physical surroundings but also looked at the social welfare of her patients by providing patients with access to natural light, air, landscape, attention to diet, as well as a clean and sanitary environment.

# What does 'Humanised' mean in design of healthcare spaces ?

"Humanize means to give humane conditions to anything or any place. It is a value that respects human life. It embraces social, ethical, educational and psychic circumstances inherent to every human relationship."

(VASCONCELLOS, 2004, p.23 in Nascimento in 2018 (IPH)).

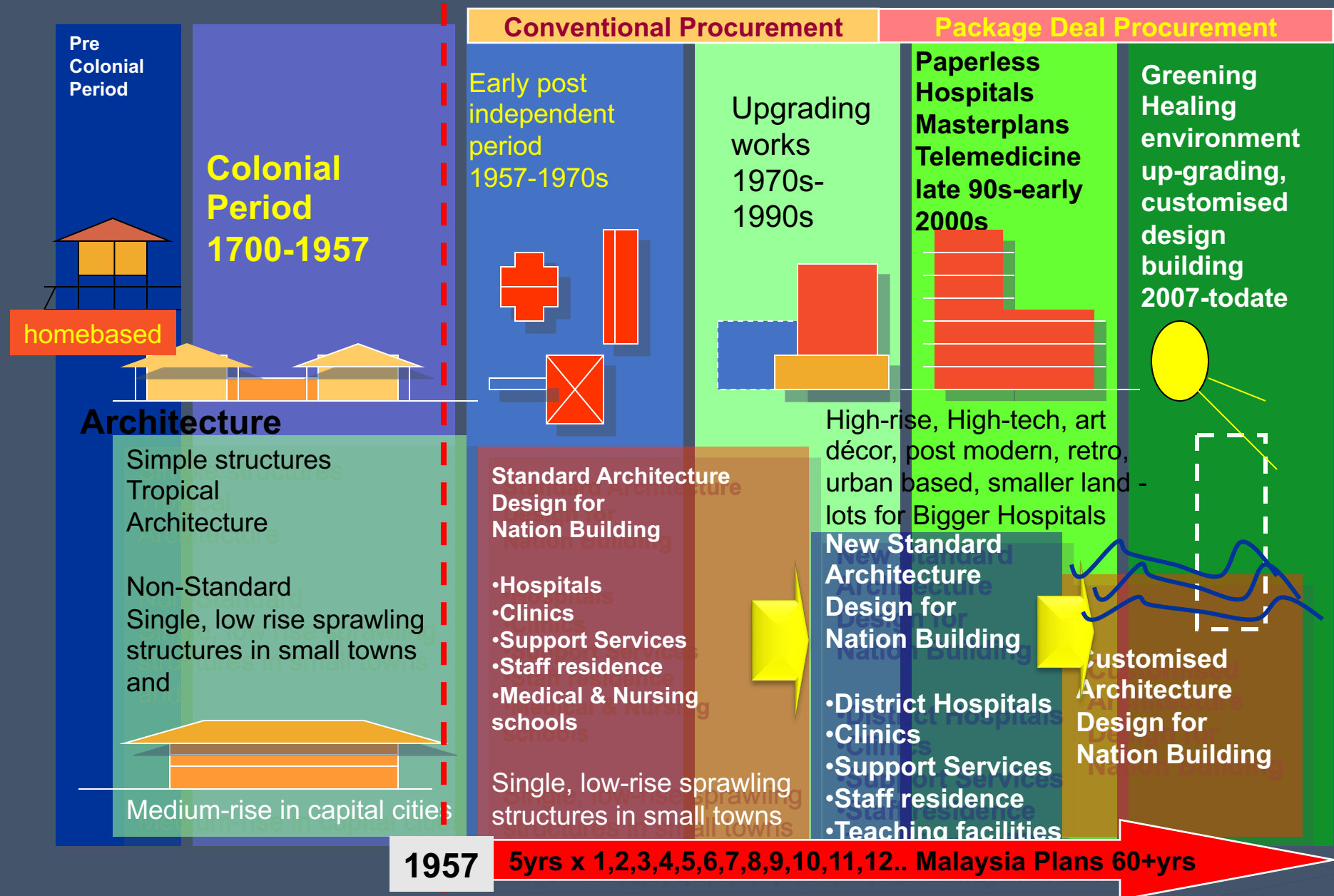
# Evolution of humanistic expression in Hospital Space Designs in Malaysia

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- Malaysia inherited Colonial or British East Indian Company hospital designs from the 18<sup>th</sup> century. Some of these hospitals are still in use today (Chang (2009)).
- Generally, the spaces provided followed the trend found in all the colonies, with the exception of climatic requirements.
- Upon independence, a five-year development plan was in place to improve the health status of Malaysians

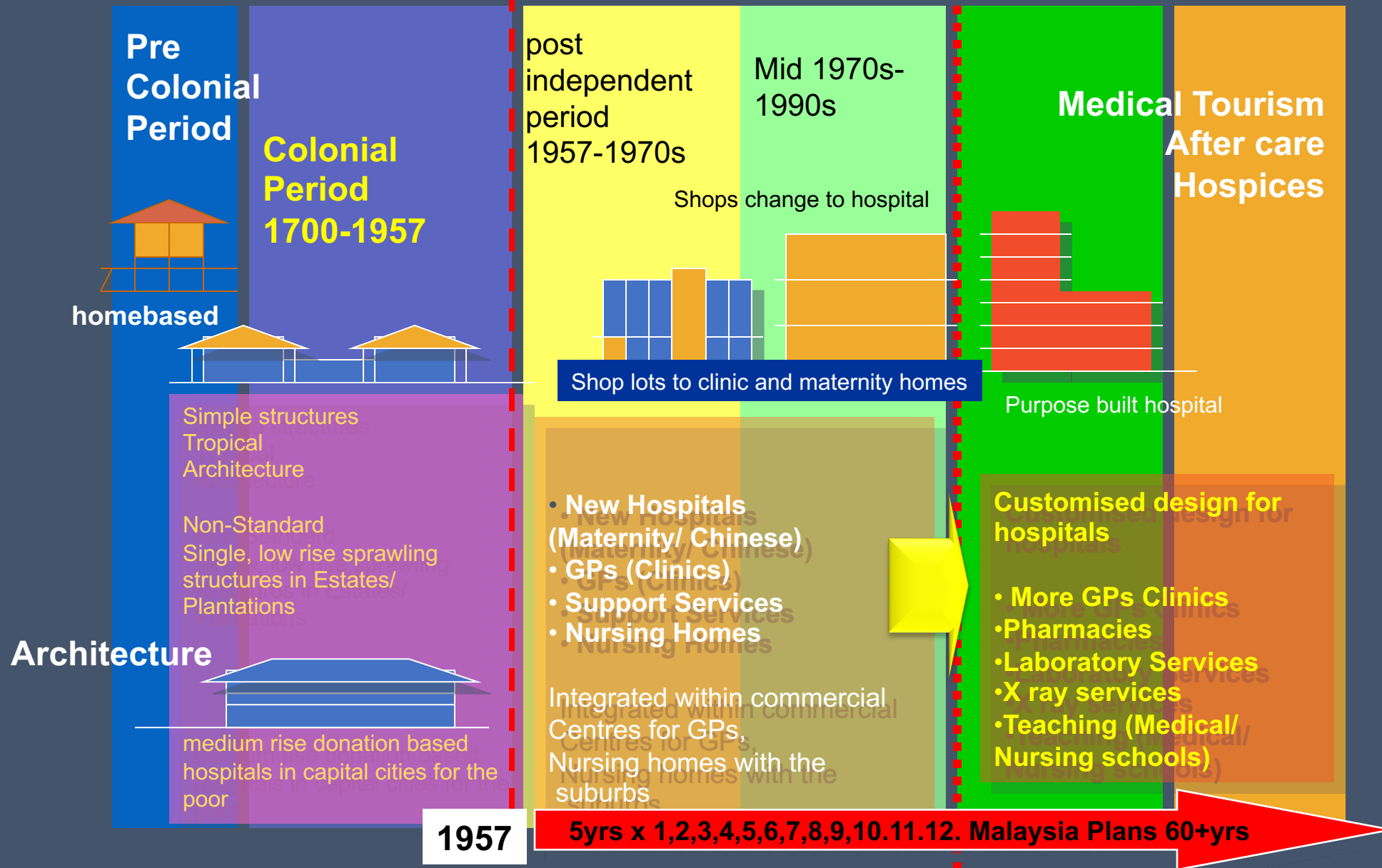


# PHYSICAL EVOLUTION OF PUBLIC HEALTHCARE FACILITIES ARCHITECTURE NATION WIDE

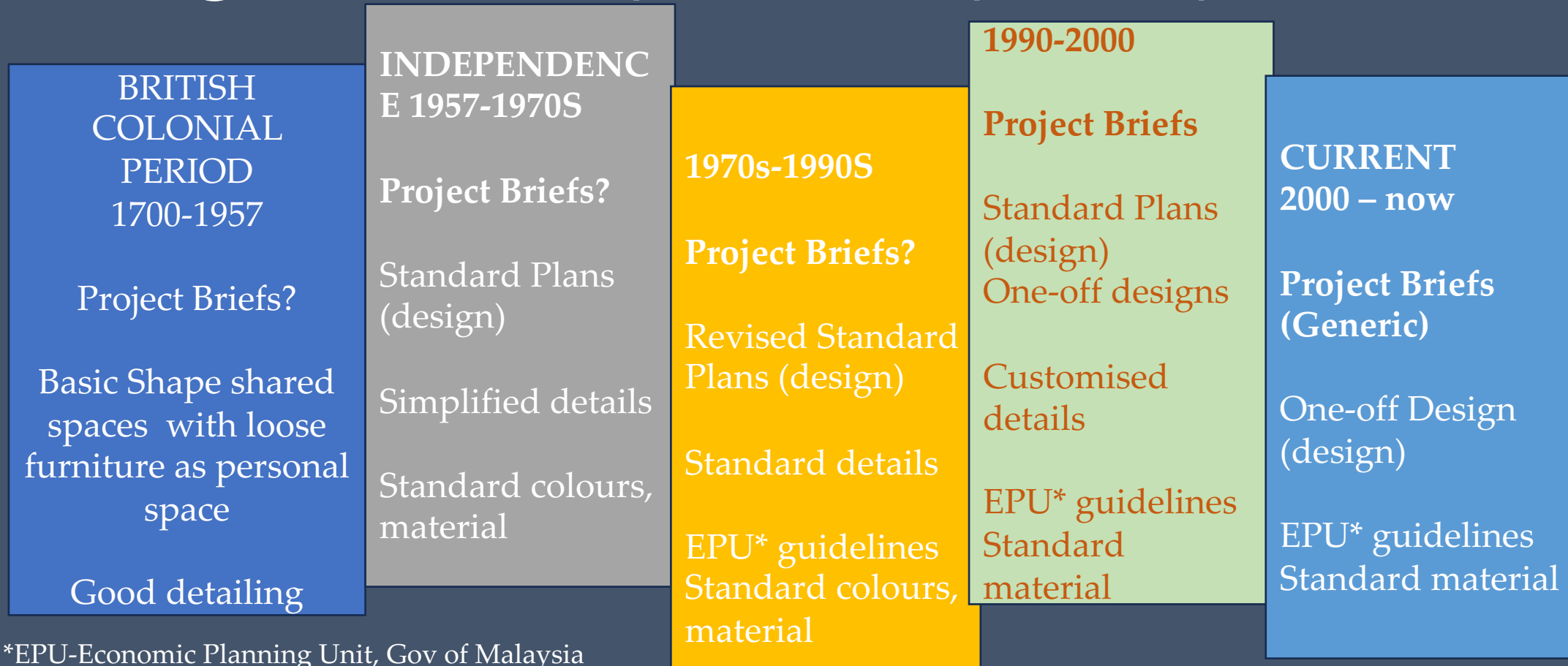


# PRIVATE HEALTHCARE ( URBAN BASED)

Private Healthcare Facilities and Services Act  
1998



# Brief Historical Expression of **humanistic designs** in Malaysian Hospital Spaces




\*EPU-Economic Planning Unit, Gov of Malaysia





# Patient Focus Care Versus Clinical Focus Care



Colonial  
Days  
approaches

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Pre 1957.

# Colonial design hospital space planning

- Hospital spaces in Colonial-type hospitals were designed according to the basic functions of a hospital.
- In rural areas, hospital buildings were designed as blocks. Each block or pavilion was designed differently to reflect its function. These pavilions are connected by corridors as a whole hospital. Spaces within each of these tropical pavilions suit its purpose. They were ward pavilions, clinics block, laboratory block, operation theatres block, radiology block, pharmacy block, stores, garages and a kitchen block.
- In urban areas hospitals were built vertically. The wards are usually at the wings and linked centrally to the diagnostic and treatment areas in the centre. Support facilities were built in separate buildings linked by corridors.
- All buildings and clinics were generally naturally ventilated

# Colonial design hospital space choice of materials

- Building materials are generally standard throughout the country.
  - Brick masonry wall and columns,
  - Timber trusses or metal/cast iron trusses,
  - Solid timber doors and timber shuttered windows,
  - Occasionally timber columns
  - Occasionally cast iron for window frames,
  - Cement-rendered floor, terrazzo in situ or tile,
  - Tiled wall for wet areas till 5 feet.
  - Mosaic tile for wet floors

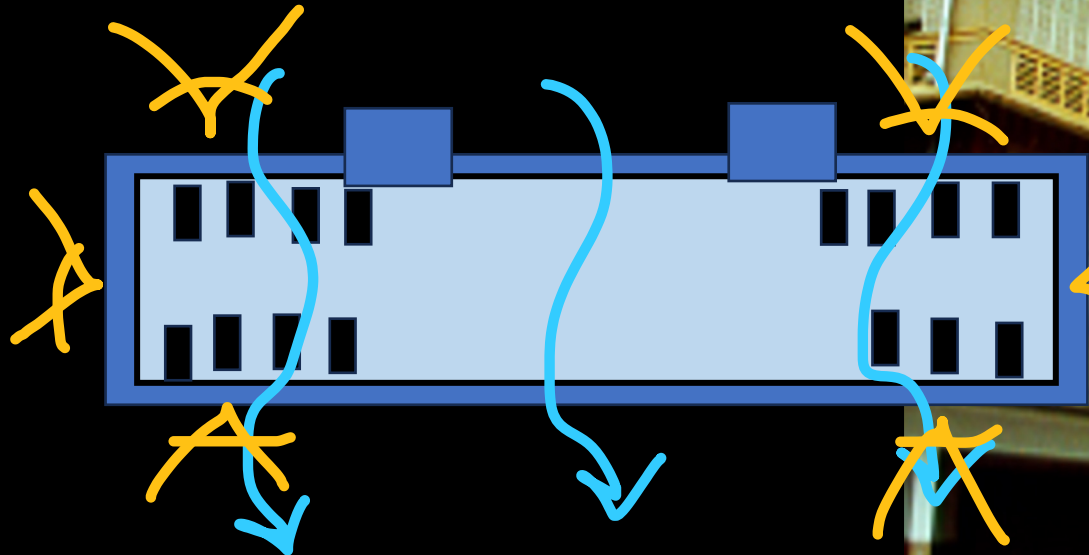


**TANGLIN HOSPITAL, KUALA LUMPUR**



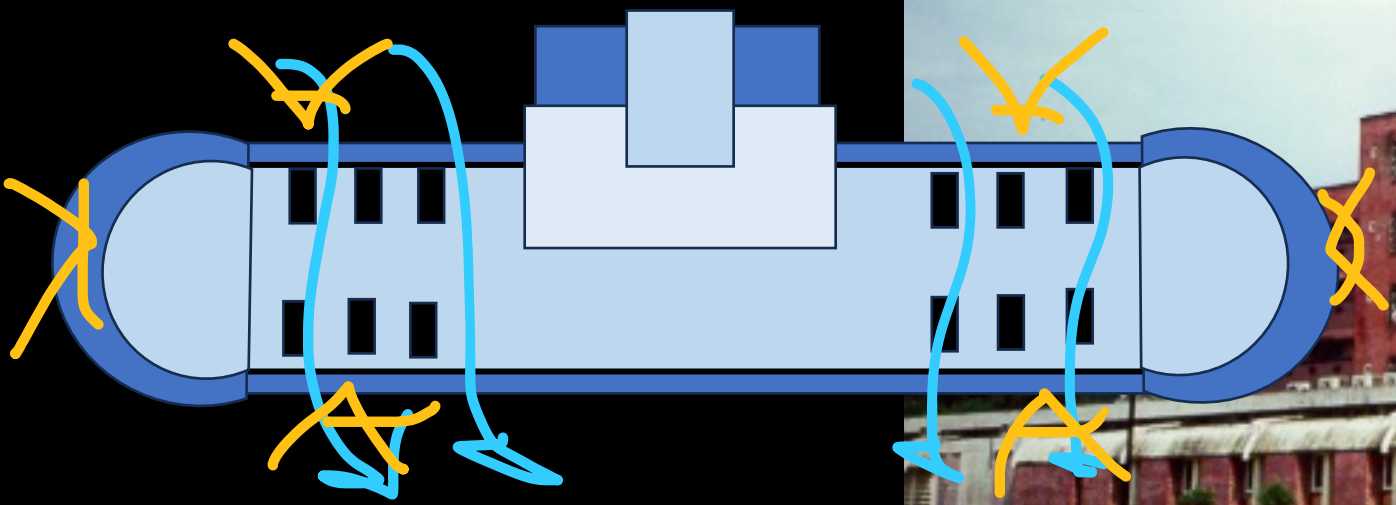
**PENANG HOSPITAL, PENANG**





Perimeter sun-shading

Shuttered windows



## CASE STUDY: SUNGAI BULOH LEPROSARIUM (Completed in 1930 and still in use now )



Historically by default, leprosy patients were ostracised and strictly segregated in prison-like institutions from the public to prevent the disease from spreading. These inhumane methods were changed in 1923, with Dr Ernest Travers, the former Selangor state surgeon, proposed an enlightened policy to reform the management and planning of leprosaria and made Sungai Buloh leprosarium a model human settlement to the outside world, with democratic, self-supporting and educative characteristics. Free from any forms of confinement, the Sungai Buloh Leprosarium was an open human settlement with social amenities and modern medical facilities of the time and where patients could live independently while undergoing their long-term treatment with dignity (UNESCO, 2019).



High ceiling

Long windows

Beds by the windows

- The architecture of the Sungai Buloh Leprosarium is utilitarian in character.
- The buildings are all single-story with plain facades, vertical openings, high ceilings and pitch roofs.
- The low density, domestic scale and plain architecture created a harmonious countryside atmosphere and a sense of belonging for most patients who used to live in villages without feeling segregated in medical institutions (UNESCO,2019).

# Immediate Post Independence

*After 1957 in the 60s-70s*

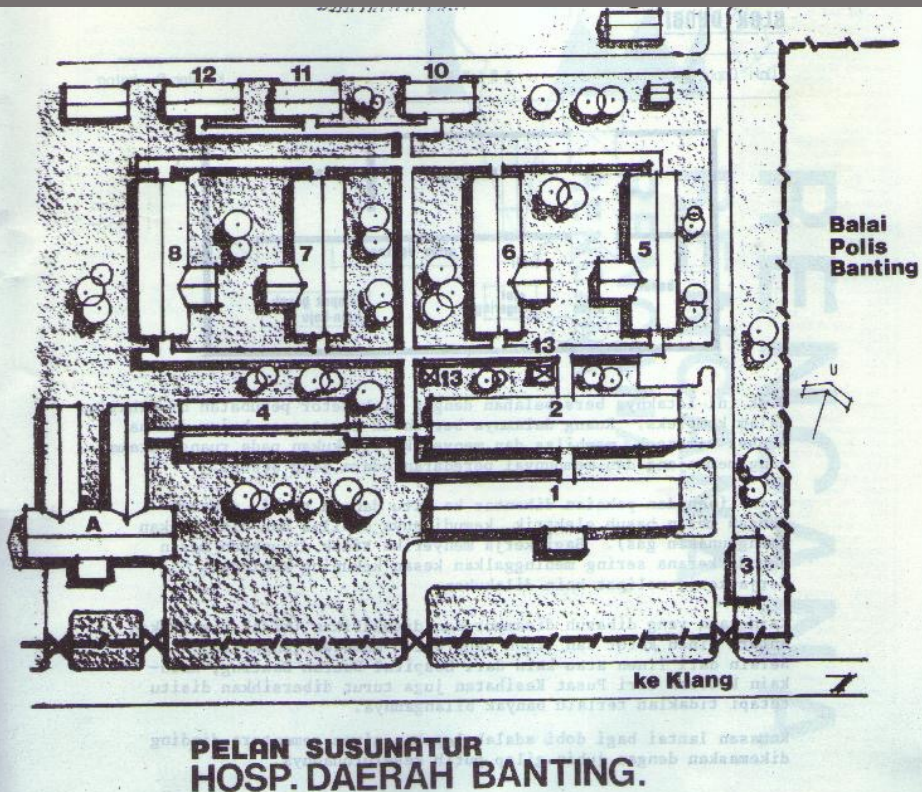
# Design of Hospital Spaces **post-independence**

- After independence, STANDARD PLANS emerged to supply healthcare facilities throughout the country.
- The design of healthcare spaces was and still is, to some extent – **staff-focused i.e. logistics** .
- Apart from design to address the economics, the outcome is very clinical, very institutional in planning and design, still following the colonial based designs and thus utilitarian stark appearance throughout.

# Design of Hospital Spaces post-independence

- Architects in the public sector were informed and instructed to maintain simple box-like design plans for ease of construction and lesser cost.
- Use of standard materials, i.e. terrazzo and cement render for floors, painted plaster walls, White glaze wall tiles up to 5ft height all around and mosaic floor for wet areas and louvred windows
- Colours were standardised to white for walls and tiles with antique colours for door frames and timber doors. Those were the standard of the day on how we design the spaces.
- Humanistic in scale, but design innovation was minimal

1970s - Jerteh Type  
Hospital for 100-  
150 beds



- T SHAPE WARD



# 1980s Hospital design of spaces Approach

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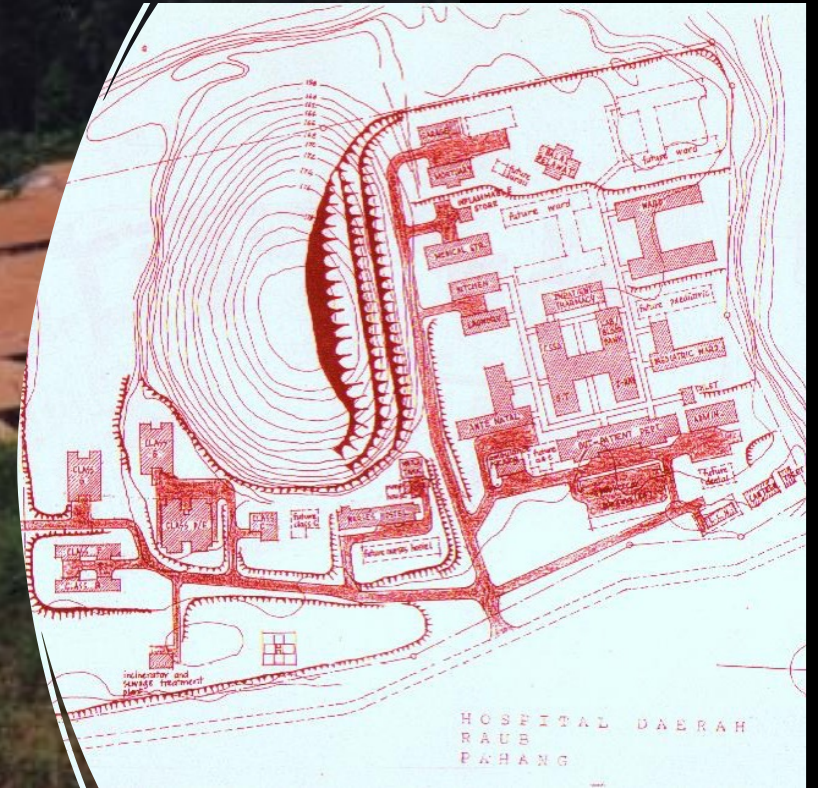


# Malaysian Health Vision

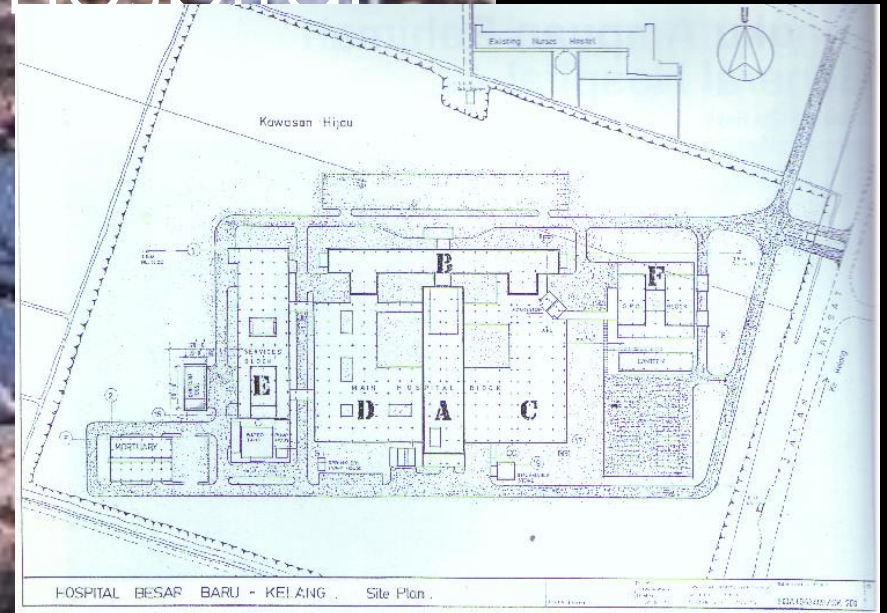
*“ Malaysia is to be a nation of healthy individual, families, and communities, through a health system that is equitable, affordable, efficient, technological appropriate, environmentally adaptable and consumer friendly, with emphasis on quality, innovation, health promotion and respect for human dignity, and which promotes individual responsibility and community participation towards an enhanced quality of life”*

Ministry of Health Malaysia (1990s-2000)

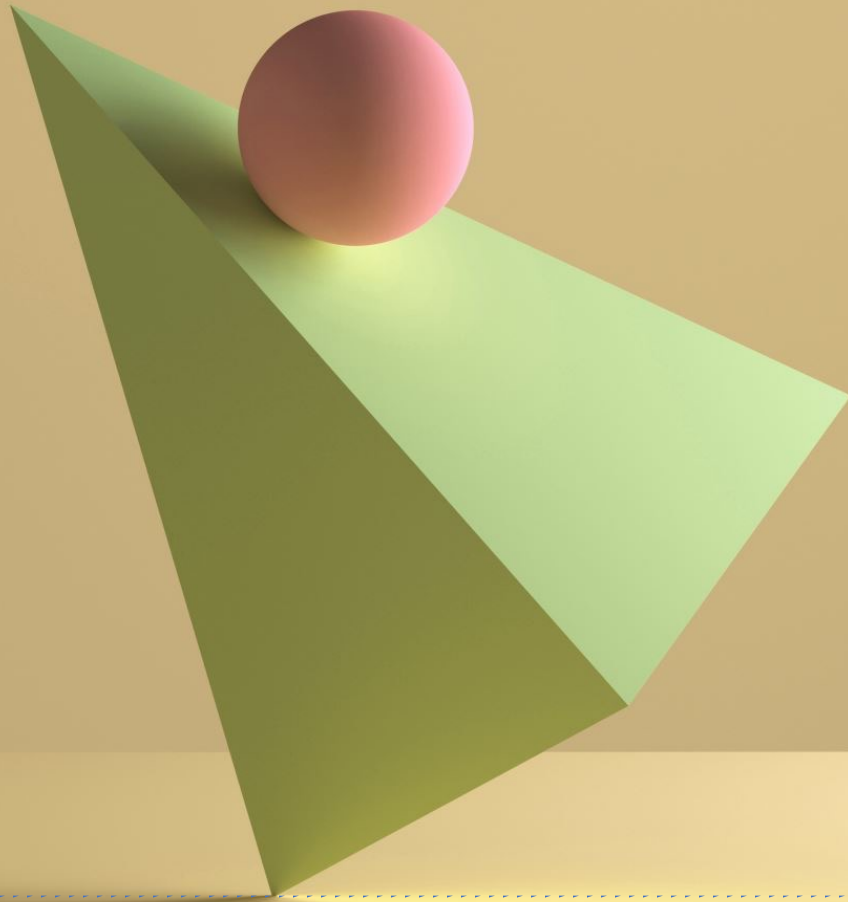
# H ward layout plans



# Sultanah Afzan Hospital Kuantan -1000 bed hospital



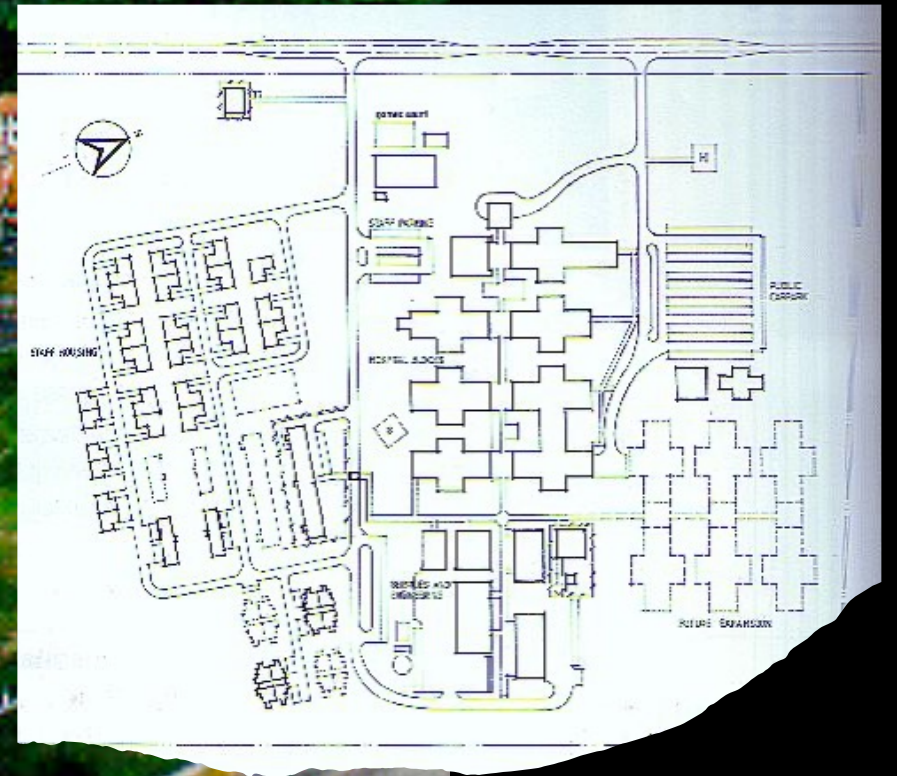
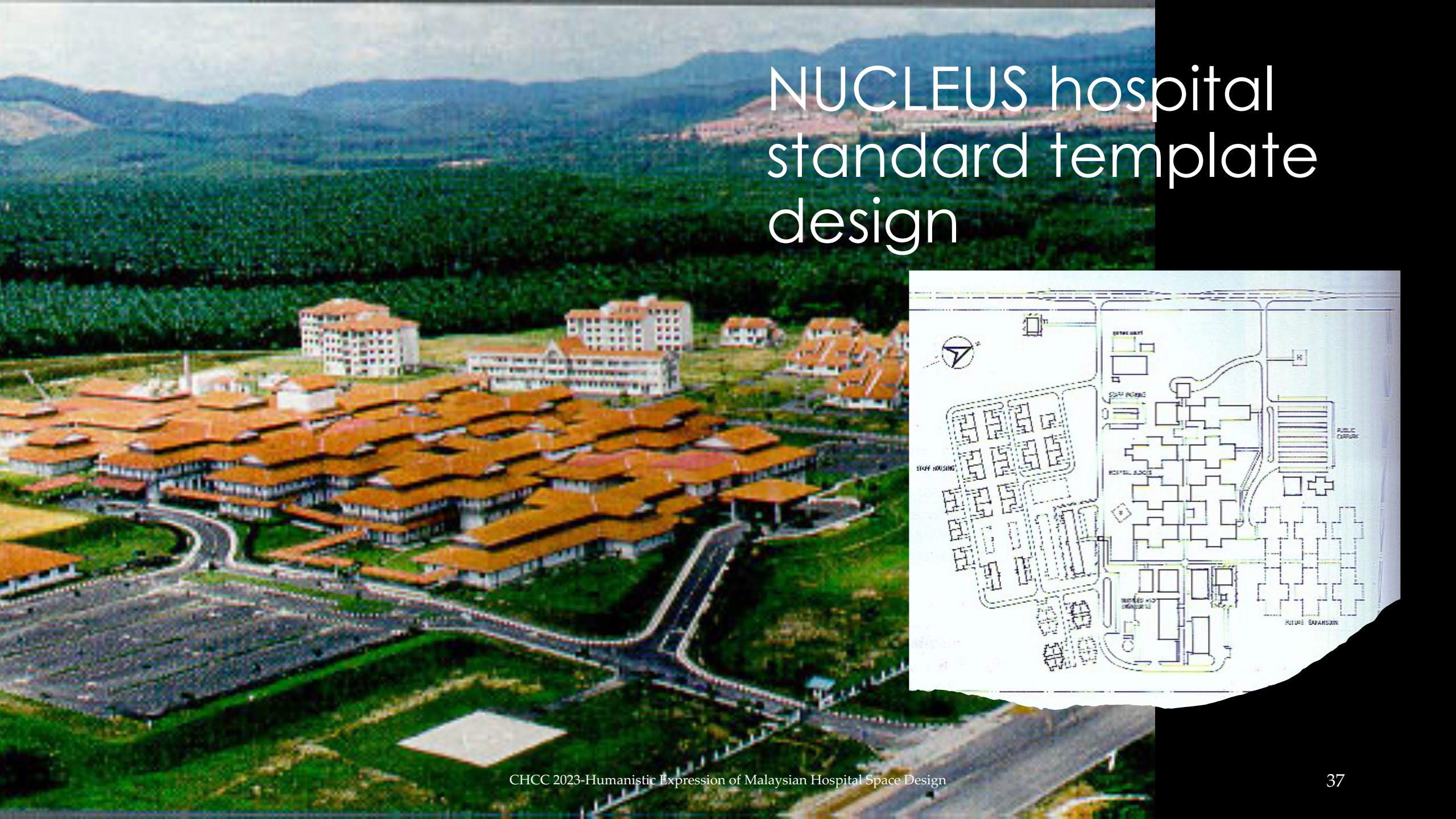
STATE HOSPITALS – KLANG,  
IPOH, KUALA TRENGGANU,  
SEREMBAN, UNIV HOSPITAL  
KUBANG KERIAN




# 1990 Approaches

STANDARDS (JKR) DESIGN  
NUCLEUS HOSPITALS  
ONE OFF DESIGNS  
UPGRADING

# NUCLEUS hospital standard template design







# 2000-current approach

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# Ministry of Health Malaysia's Current Vision & Mission

Malaysia will become a nation composed of individuals, families and healthy communities through health system fair and equitable, efficient, able to made available and appropriate technology available, compatible and **appropriate to the customer environment.**

Source: Ministry of Health Malaysia

To lead and work in partnership.

To facilitate and support the people to:

- Attain fully their potential in health
- Appreciate health as a valuable asset
- Take individual responsibility and positive action for their health

To ensure a high-quality system that is:

- Equitable
- Affordable
- Efficient
- Technologically appropriate
- Environmentally adaptable
- **Customer centered**
- Innovative

**With emphasis on:**

- **Professionalism, caring and teamwork value**
- **Respect for human dignity**
- **Community participation**



# Re-Definition of the term Humanistic in the Malaysian Context

- For Malaysians with multi-culture and intrinsic beliefs, the humanistic approach applied in Malaysian healthcare facility spaces is UNIVERSAL for Malaysian Culture.
- The process ranged by the priority of the space functions as follows:

**Clinical spaces-** are spaces where patient care, diagnostic and treatment, as well as medical support are made. These areas have limited intervention for non-clinical functions within the space. To follow stipulated operational policies)

**Non-Clinical spaces** are non-medical spaces which include administrative spaces, general waiting areas, and support services such as food and linen, cafeteria, etc. ID is allowed to make an intervention in these areas apart from lobbies, foyers, receptions.

# Clinical Functionality (WHO)

Clinical functionality of a hospital is based on the environment that place 'PATHOGENIC' criteria as it is based.

WHO (1985), described 'essential spaces' of a hospital design as essential clinical spaces that need special or controlled environment. These spaces place infection control and the safety of the patient through spatial configuration layout and sustainability of the bio-medical equipment as a priority environment. Pathogenic criteria require the environment of the space where a patient suffering from certain diseases or undergoing diagnoses or treatment to be provided with the following "must do" considerations:

1. Air space and distances that will allow effective flow of air for good ventilation to prevent infection control apart from filters and availability of clinical hand-wash basin;
2. Medical equipment to diagnose and tools for treatment which itself requires certain environmental conditions;
3. Medical supplies with their own environmental requirement
4. Medical personnel with a required clinical procedure that includes circulation,
5. Capacity, clothing types;
6. Appropriate general and task lighting to support procedures and avoids
7. Medical error; and
8. Building services, i.e. medical gases, electrical socket outlets, lighting, etc as
9. emergency and functional support.

# Definition of the term Humanistic in the Malaysian Context

Strict Clinical requirements and Safety for patients and staff override human emotions

The **Uniform Building by-laws**, accessibility requirements in the UBBL as per **MS1184** , and care for patients as per the **Private Healthcare and Facilities Act 1998 for private healthcare facilities, and other guidelines** are as humane as possibly can to ensure the delivery of quality care can be achieved.

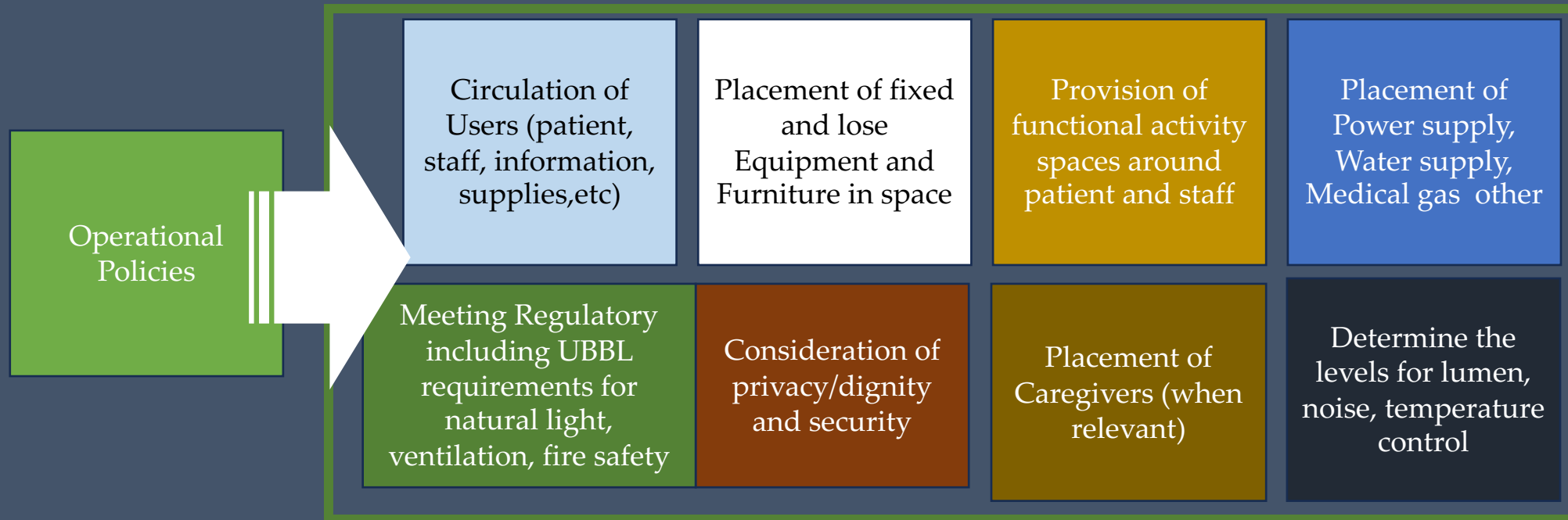
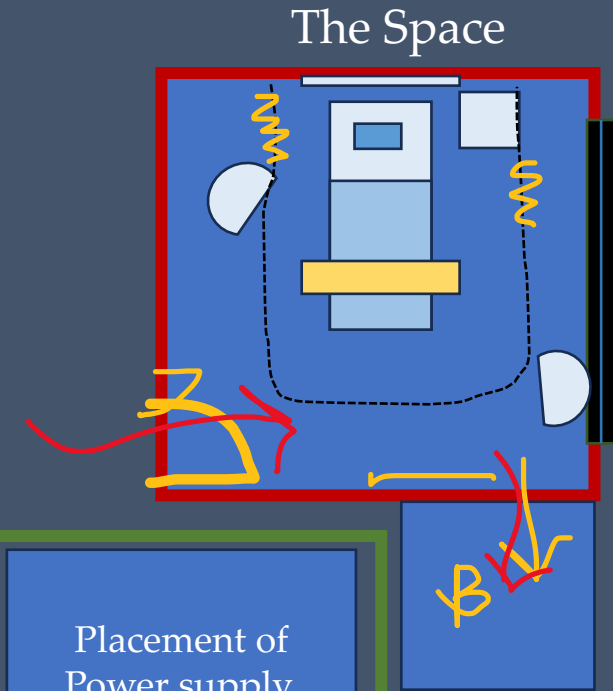


Interpretation or **Expression of humane qualities** differs according to clients and experience, skill or compassion of the designers- Architects and Interior Designers (ID).

# Re-Definition of the term Humanistic in the Malaysian Context

## FOR CLINICAL SPACES

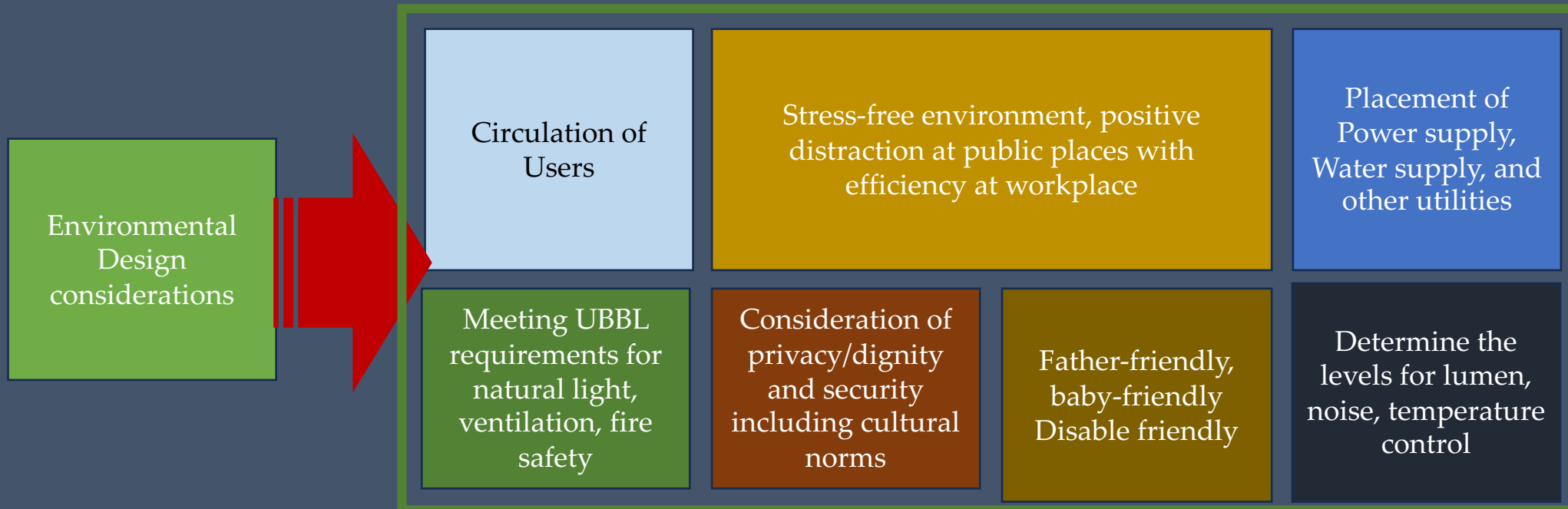
Standard Operating Procedure (SOPs) or OPERATIONAL POLICIES as the guiding protocol written in the Design or Medical Briefs of Requirements and regulatory requirements.



# Re-Definition of the term Humanistic in the Malaysian Context

## FOR NON-CLINICAL SPACES

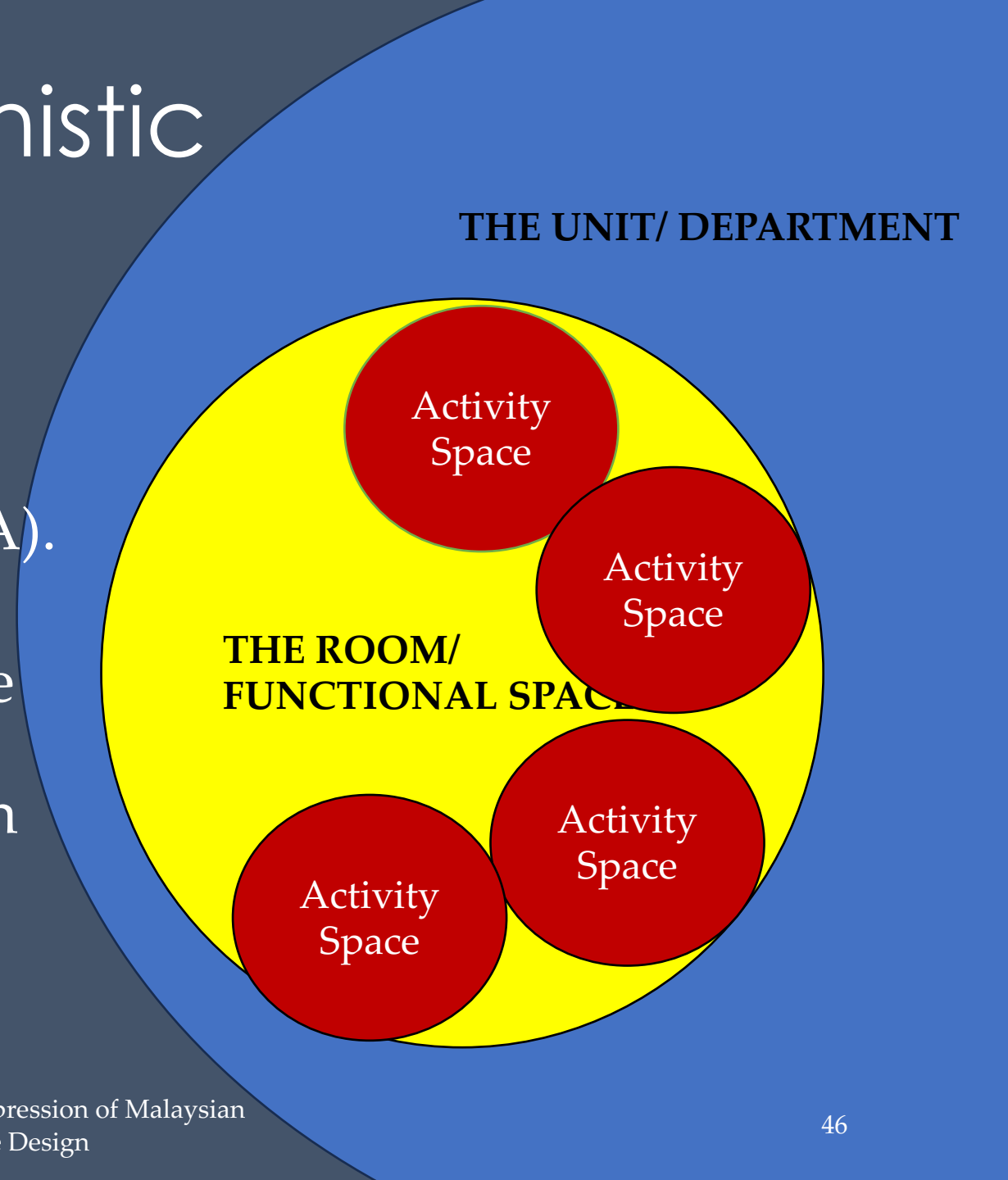
General requirements as per  
brief accepted cultural norms  
and regulatory requirements



# Approach to Humanistic Space Design

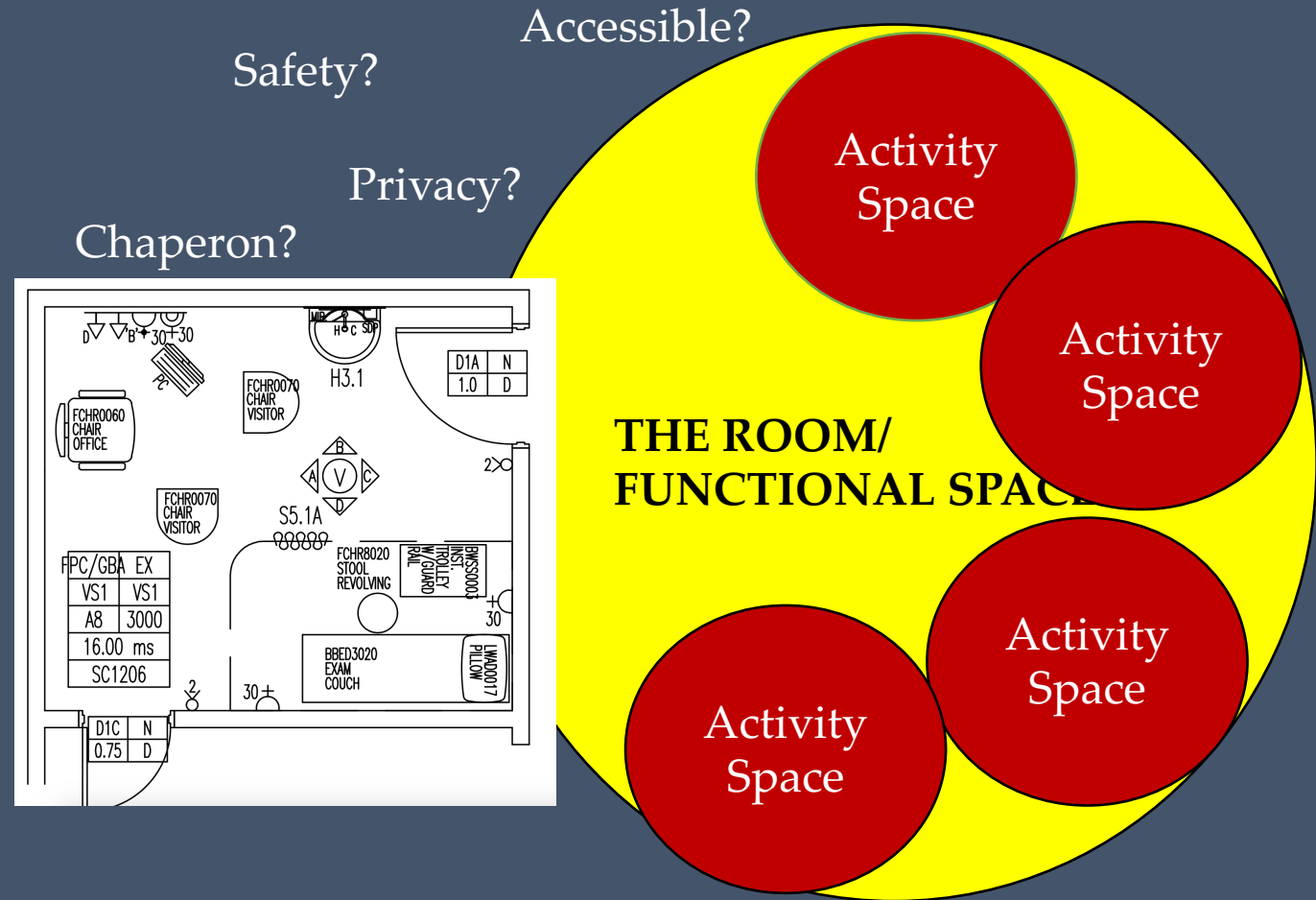
In hospital design, the architect arranges spaces from the list of approved spaces or the final Schedule of Accommodation (SOA).

Spaces are put together for departments or units into cohesive spaces with acceptable/efficient adjacencies for the ease of function under the **SPACE PLANNING exercise**.



# Approach to Humanistic Space Design

- Designers preliminary designed the spaces according to the design brief requirements, and the Room Data discussion to verify the layout, placement, dimension and the ambience



- Surau/Musolla – prayer / religious activities
- Balai pelawat/Visitors' Hall – facilities for visitors
- Atriums, hospital street- welcoming gesture (hosp sri aman)

**Cultural, Social & spiritual elements**

# Humane environment

**Functional element**

- Built ins – nurse counter for patient monitoring (ccu)
- Fittings and accessories – prevention of cross contamination (lever handle, autodoors,etc), protection of properties (push plates, etc)

**Physical Accessible element**

- Quarters within hospital complex (Simpang 5, Lady Templar, Sri Aman, Sarawak)
- Wayfinding – signages
- Universal design – ramps, Oku toilet, etc

- Gardens
- Integrating courtyards to break deep planning (layout-hospital Sri aman Sarawak)

**Healing element**

- Maximise openings for better ventilation and natural lighting (rehabilitation)
- Biophilic pattern & ID themes - playful themes for paediatric section

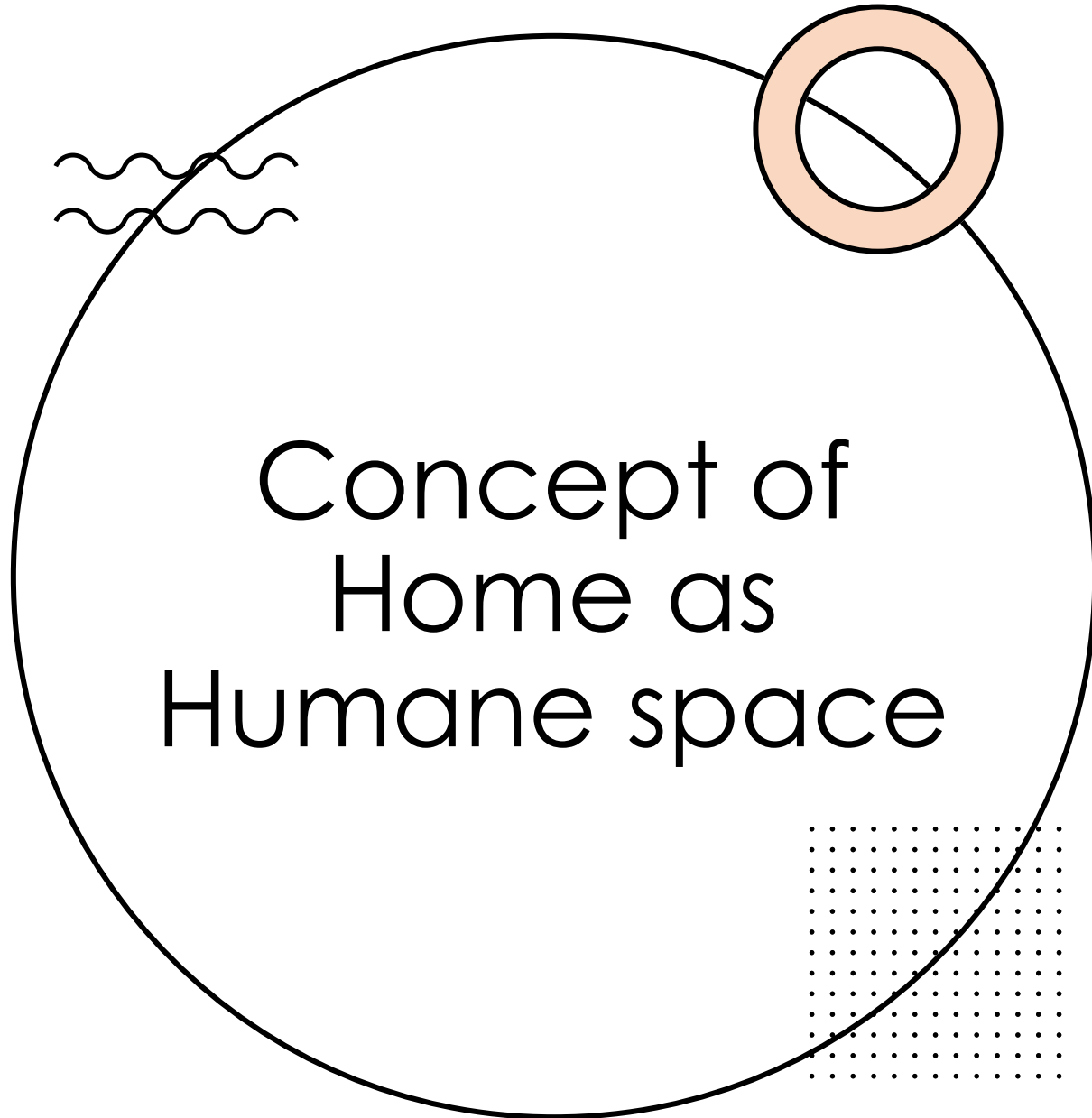
Courtesy of Ar Nur Halinda Halimi (JKR)





Selayang Hospital, Selangor, Malaysia

Towards  
Embracing  
Digital  
technology  
and  
HUMANISTIC  
environment  
for humans  
in  
healthcare  
environment



- Focusing on the patient's needs, HOME to them there are again different to the different age groups of patients, backgrounds, sexes, length of stay in the hospital and their ailments.
- Category of service providers/users also has differing 'home' needs.

# The Stakeholders

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The users of the facility i.e.

- The Relatives as supporters to the patient,
- the Staff as the service provider to the patient and
- the system that upheld the operations and environment need to be looked after as well.

Hence bringing HOME environment into hospital setting need to be addressed to explicitly

# Excerpts from MoH Planning Norms and Guidelines(1998)

Requirements of specific wards:

## a) Paediatric Ward

- A mother's bed cum sofa to every paediatric bed.
- Play area.
- Rest area and pantry for mothers.
- School room and library.
- (The mother's pantry, the school room and the library may be shared if designs permit)
- It shall be designed, decorated, and equipped as a cheerful environment for children.

# Excerpts from MoH Planning Norms and Guidelines(1998)

## 1. On-Call Complex / On-Call Rooms

1. The on-call complex shall be provided within the hospital compound in hospitals with more than 250 beds.
2. Dedicated on-call rooms shall be provided in all wards and other critical units, e.g. Labour and Delivery Suite, ICU, CCU, NICU, Ots, Emergency Department, etc. In hospitals with less than 250 beds, the room shall be shared.

# Excerpts from MoH Planning Norms and Guidelines(1998)

1. Other than the clinical areas, the following areas are required:

- Visitors lounge (may be shared between 2 wards)
- For hospitals with 500 beds or more, a seminar room shall be provided in each ward. In hospitals with less than 500 beds, a seminar room may be shared between 2 wards.
- Day area for patients in each ward.
- Shower/WC for each bay or room.
- Individual armchair for patient, locker and wardrobe (not bank of wardrobes).
- Wash and dry areas for patients.

# Excerpts from MoH Planning Norms and Guidelines(1998)

1. All hospitals shall be designed as baby-friendly and community-friendly hospitals. Therefore, facilities for the disabled, breastfeeding rooms and a nappy change area shall be provided in all hospitals.
2. Prayer rooms may be shared among staff, the public and patients. Depending on the design and layout, a prayer room may be shared between departments, units and wards.
3. Ceiling fans shall be provided for each individual third-class bed.
4. All working areas shall have windows and natural light.
5. Taps of clinical wash-hand basins shall be of the elbow action type.
6. Outdoor therapeutic gardens shall be provided in all hospitals. It shall be accessible to the public, including the handicapped.

# Recent Hospital Architecture

- Serdang Hospital
- 500 beds
- First steel composite hospital in the country.
- (Outpatient Entrance)

Atrium / Spacious Lobby and waiting area  
Plenty of sunshine/day light  
Extensive gardens  
Customised design  
Interiors.





**Specialist Clinics Ambulatory  
Care, Hospital Kuala Lumpur**

# Patient-Focused Care according to MoH Malaysia

Other improvements in planning towards patient-focused care are the provision of children-friendly, mother-friendly, elderly-friendly, baby-friendly, husband-friendly, disabled friendly and user-friendly in: -

In the Wards , Day space in the wards for socializing; relatives wait within the facility for support; prayer room for daily prayers and meditation; attached toilets within accepted distance for convenience, more space within individual cubicles that is regulated; safe and secure for self-esteem and privacy; mothers rooming-in facilities, schoolroom and play area for paediatric patients, and other;



Ward layout plan



Mother's/C are giver's sofa bed



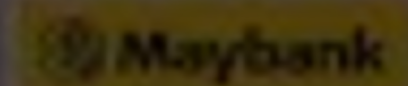
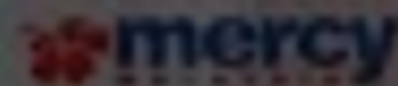
Ward reception

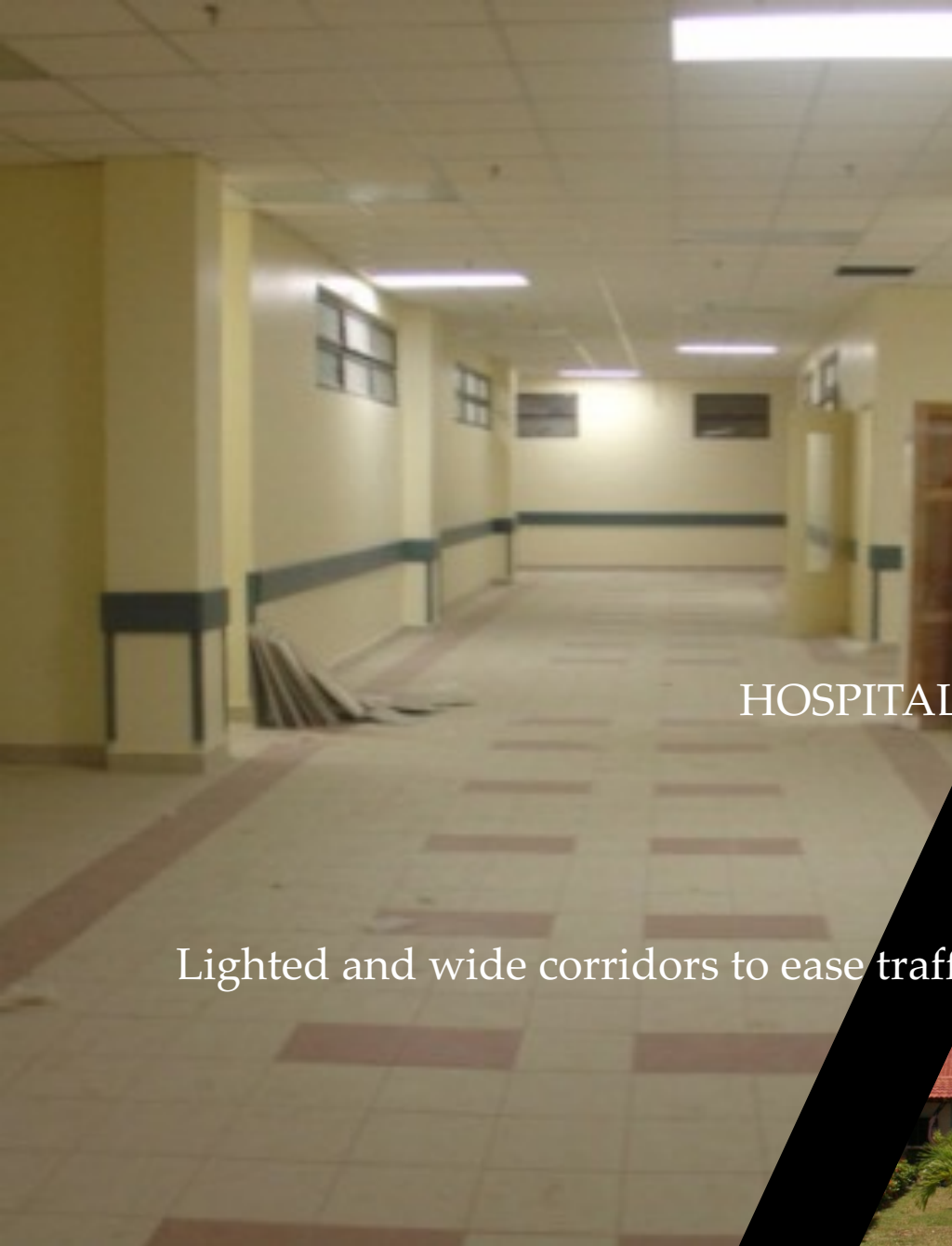


Secured entrances

## Women and Children Hospital, HKL

1,2,4 beds per room, pastel colours, standard vinyl flooring, rounded edges, (December 2023)





HOSPITAL JEMPOL, NEGERI SEMBILAN

Clinical Areas

Lighted and wide corridors to ease traffic



Domestic architecture in the country

# Patient-Focused Care according to MoH Malaysia

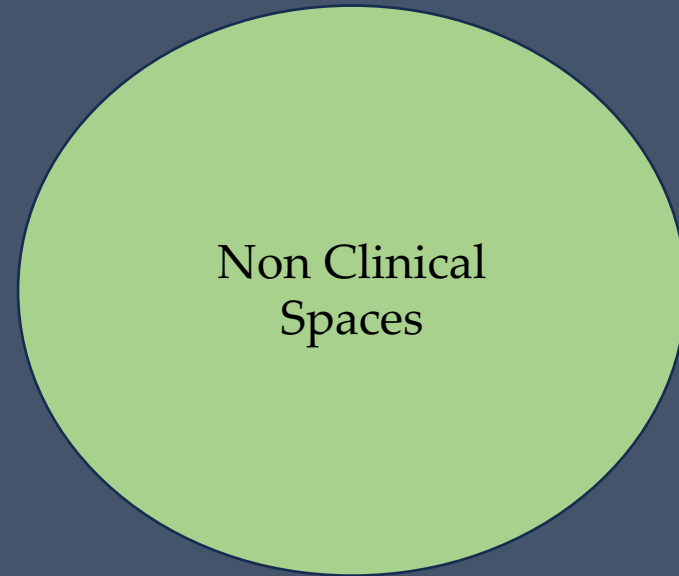
**In The Specialist Clinic** One stop centre for patients without going to other departments i.e. for laboratory tests, venepuncture, registration and appointment, central waiting with children play area, procedure rooms within walking distance, satellite x-ray services and other;

**In The Ambulatory Care Centre**, the setting up of an ambulatory care centre as part of the hospital care or stand-alone, which are made up of Day Care Unit, Multi-user Specialist Outpatient Clinics, Rehabilitation Unit, Dialysis Unit, Satellite X-ray, Satellite laboratory and other outpatient treatment is another direction in unloading patient from acute care facilities;

**In the Labour & Delivery Units**, the concept of Labour Delivery & Recovery (LDR) as a one-stop centre is practised with the husband or female relative being allowed in to accompany the patient in labour;

# Patient-Focused Care according to MoH Malaysia

- General Spaces include spaces such as visitors' hall, main entrances, lobbies, corridors with the required facilities;





## 2000s Interior Hospital Architecture

Concourse/ Lobby  
Shops/Cafeteria  
Public Amenities  
Main Entrance  
Natural Ventilation

Image Aisyah Khalid (2007)

Main Entrance

# Research on patients' satisfaction

- The study by Shariah Syaqaq Aljunid et al (2020), concludes that design factors such as space planning, lighting, furniture and colour have a significant influence on patients' satisfaction.
- On the contrary, the research on aspects of wayfinding, safety, air quality and accessibility does not affect their level of satisfaction.
- Thus, it is imperative that with the expanding healthcare industry in Malaysia, a supportive environment is required to balance aesthetics and functionality in hospital building design.



# Review of patient needs for the future

A patient, as a human being, is a social creature with many needs. The patient needs his/her own space.

At times, the patient needs his/her immediate family to be with him/her for comfort and security.

The patient needs nursing care that is warm and sincere from the caregivers. Treatment, if required, will address his/her need for privacy and preserve self-esteem.

The patient, as a focused being, needs an environment around him/her that is pleasing to the eye, pleasant to the ears, positive smell and familiar surroundings which all in all are healing and caring in nature.

# Summary

- Humanistic design is not new and has been expressed in many ways through the human experience of conditions and circumstances throughout the ages.
- Men and Women, children, the elderly, patients, staff, visitors, and workers as humans have needs for comfort and health but different expectations and thresholds of pain.
- Malaysia's population is multi-cultural, but the hospital grounds and spaces remain neutral in their architecture and space planning for efficiency and interior design that continue to embrace function first, then the humane aesthetic as support.

Q & A





Thank you  
for  
listening

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