



**INFECTION CONTROL
SUSTAINABILITY -
FINDING THE BALANCE**

**MORAG LEE
HASSELL
AHDC**



**80'S -
STANDARDISATION**

**90's -
PREFABRICATION**

**2000'S -
EVIDENCE BASED
DESIGN**

**2010'S -
INFECTION
CONTROL**

**2020'S -
????????????????**

4.4%

The healthcare sector contributes more than 4.4% of global greenhouse gas emissions



The connection between environmental issues and health is well established - the climate crisis is also a health crisis



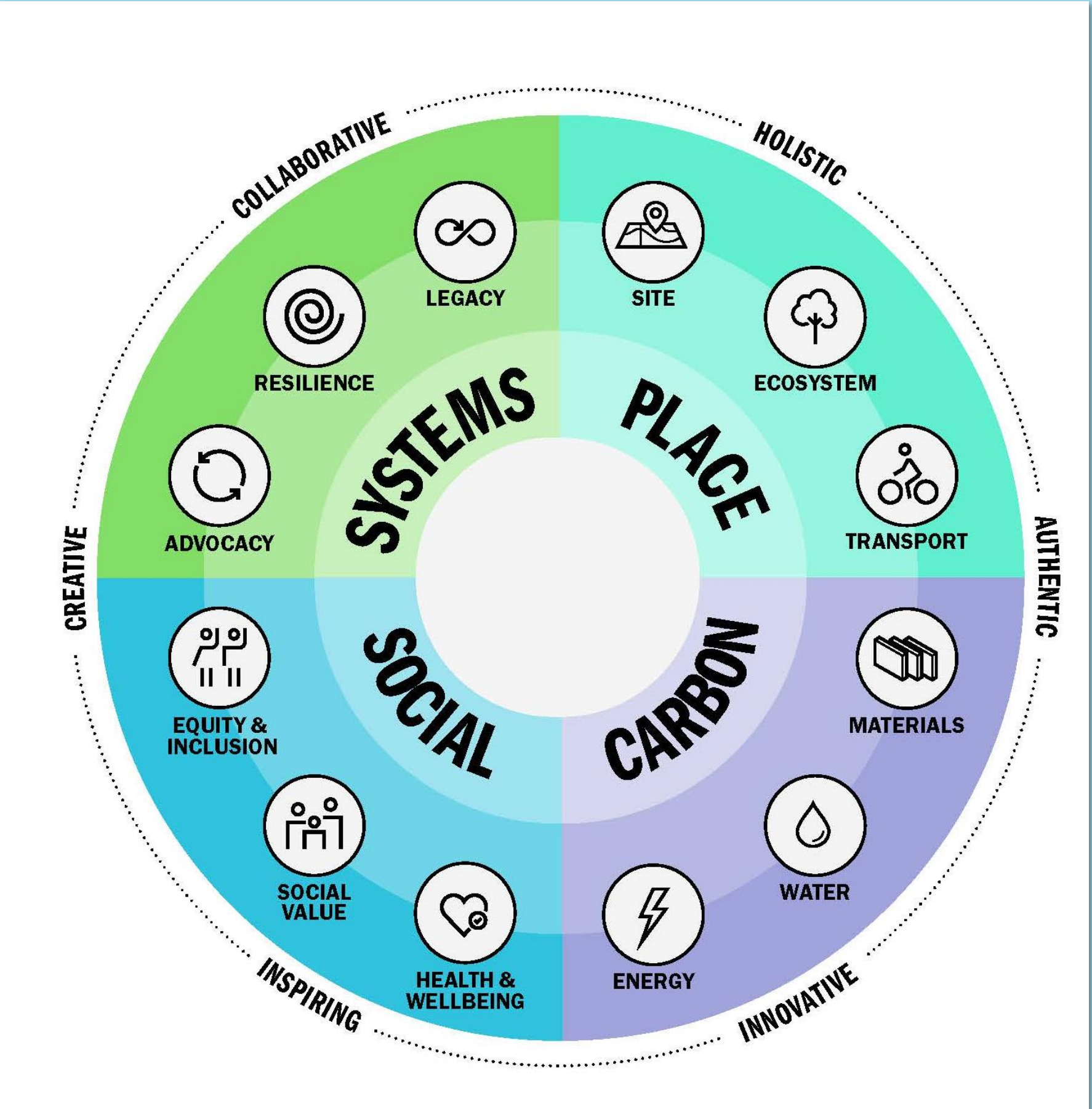
The confluence of infection control and sustainability represents an evolving paradigm within healthcare



Fossil fuel combustion accounts for 84% of all healthcare emissions



HOW DO WE DEFINE SUSTAINABILITY ?



WORKSHOP 2022

WHAT DOES A SUSTAINABLE WARD OF THE FUTURE LOOK LIKE ?

Healthy buildings that lead to healthy people

Modular and flexible design for alternative future uses

Reduce recovery time

Use of natural materials

Biophilic Design

Lower running costs

Waste recycling

Better health outcomes for patients

Carbon neutral

Reduction in Building Footprint

Soft land the buildings

Sustainability integrated into the design

Intelligent buildings utilising the latest proven technology

Remote patient monitoring

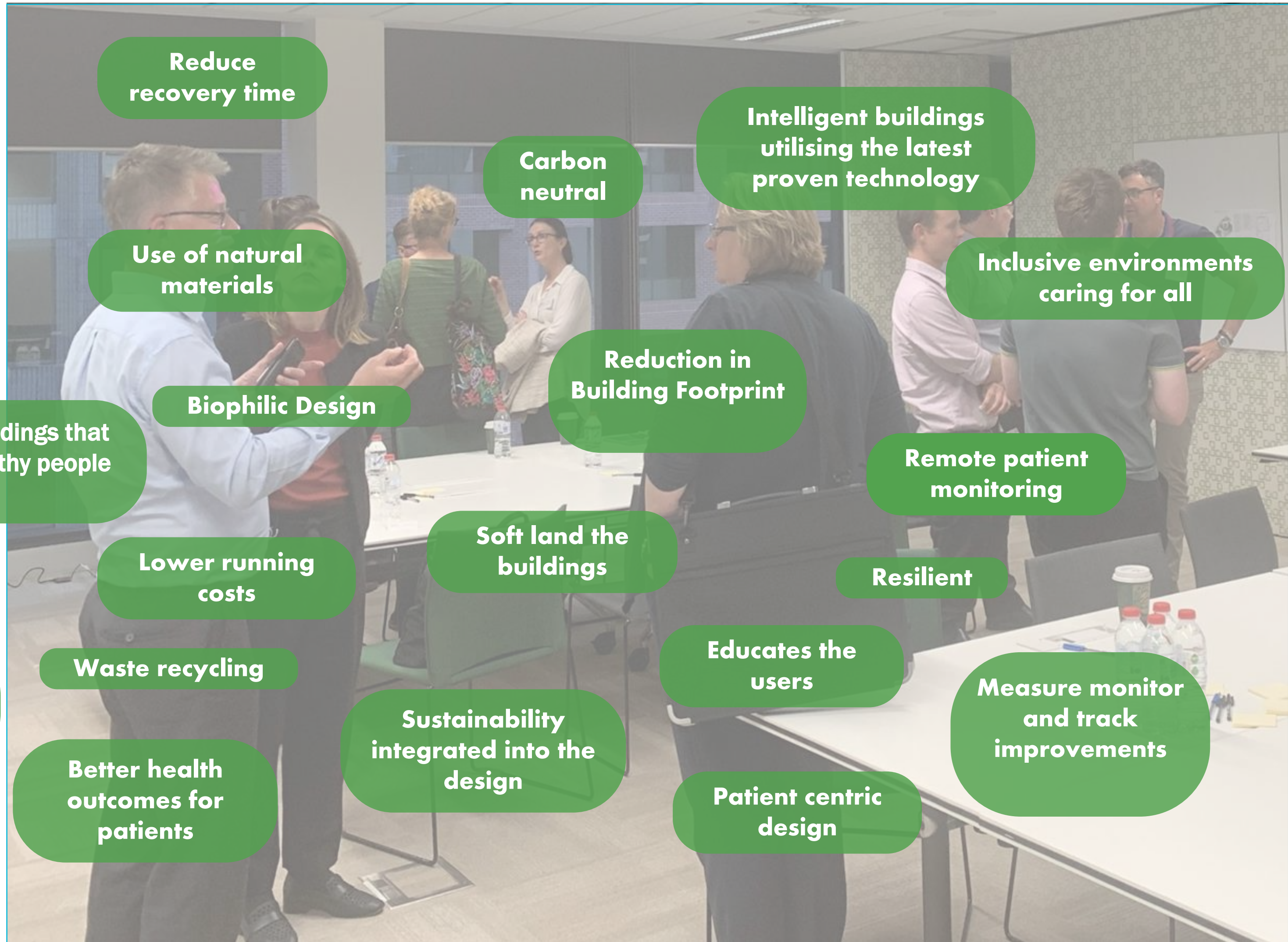
Resilient

Educates the users

Patient centric design

Inclusive environments caring for all

Measure monitor and track improvements



WORKSHOP 2024

INFECTION CONTROL

V

SUSTAINABILITY

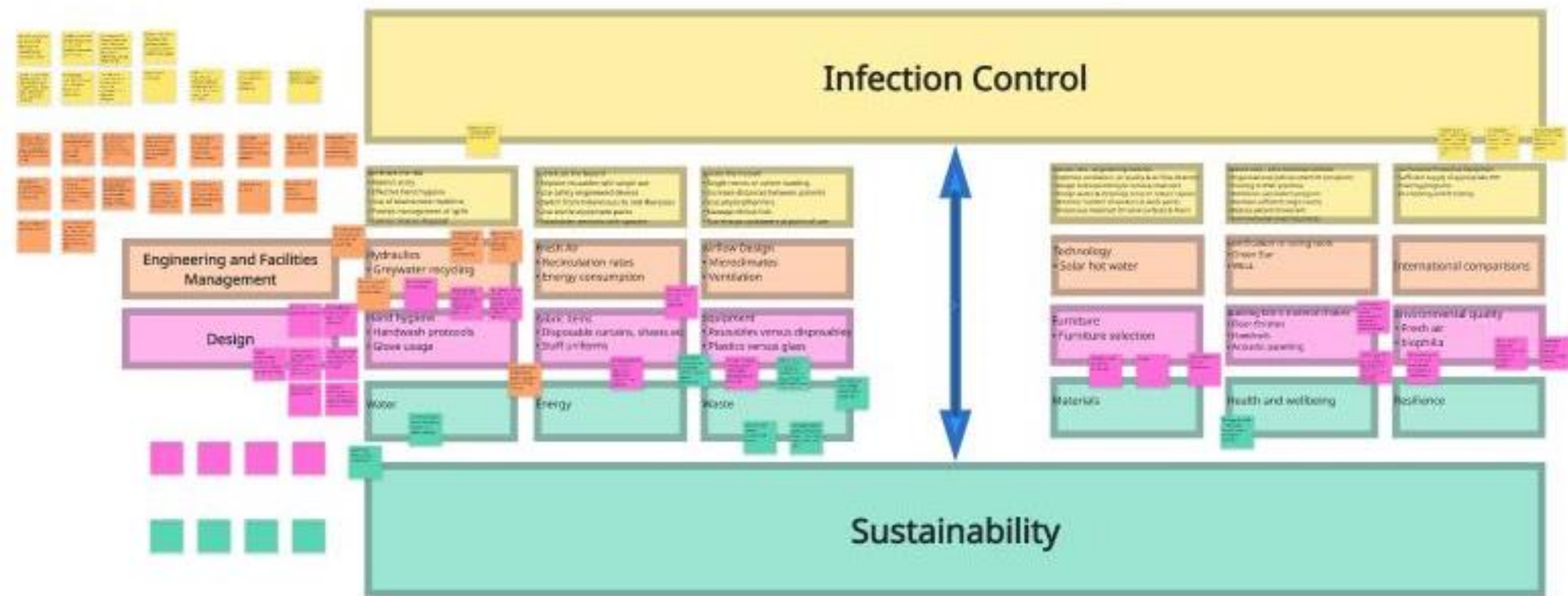
CAN WE FIND THE BALANCE

To many handwash basins not used regularly

Translation of current academic knowledge into accessible summaries for designers

Patient need to interact with the natural environment

Code compliance being a driver over good design



Flowers restricted from high-risk patients. Water and soil borne hazards

10 mins water flush each day to reduce risk – water wastage

Single bedroom with integral blinds and sealed windows are good opening windows alters internal ventilation system

single use items do not need to be single use. Not driven by infection control

Lots of design driven by codes. Design needs to take into account context/situation risk

Opportunities for mixed mode ventilation to allow windows to be opened

ASSUMPTIONS & MISCONCEPTIONS



“We increasingly rely on single use disposable medical devices under misguided notions that they are proven safer and cheaper than reusable devices”



“The high ventilation rate provided by natural ventilation can reduce cross-infection of airborne diseases, and thus it is recommended for consideration of use in appropriate hospital wards for infection control”

“Flowers are far more likely to improve a patients mood and well-being than make them sicker. Flowers are as good for sick people as they are for everyone else!”



CONFIRMATION - WHAT TO BELIEVE ?

“The findings indicate that antimicrobial copper beds can assist infection control practitioners in their quest to keep healthcare surfaces hygienic between regular cleanings, thereby reducing the potential risk of transmitting bacteria associated with healthcare associated infections”



“What if the lighting used throughout your facility came with the added benefit of fighting viruses and bacteria? providing safe, continuous germ-fighting performance via your overhead lighting”



“By incorporating the natural antimicrobial qualities of silver, Guardec SilverGuard wall cladding provides the most powerful defence against bacteria, illness and infection in susceptible, high-risk areas.”

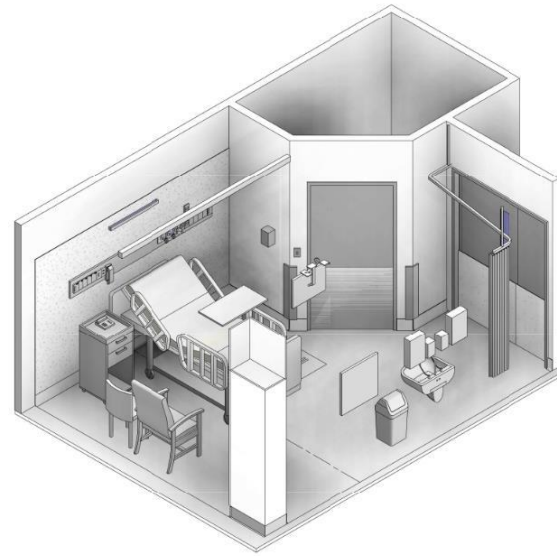
“Studies conducted by the [CDC](#) have shown that soft surfaces such as carpet and textile composite flooring are less likely to transmit infection than hard surfaces like vinyl flooring. The reason for this is that when carpets are clean and dry, bacteria and mould are unable to find the nutrients they need to multiply”

COLLABORATION

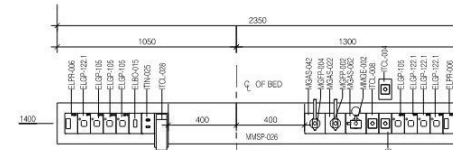
AUSTRALASIAN HFG STANDARD COMPONENTS

Room Layout Sheet

RLS Room Code: 1BR-ST-A1

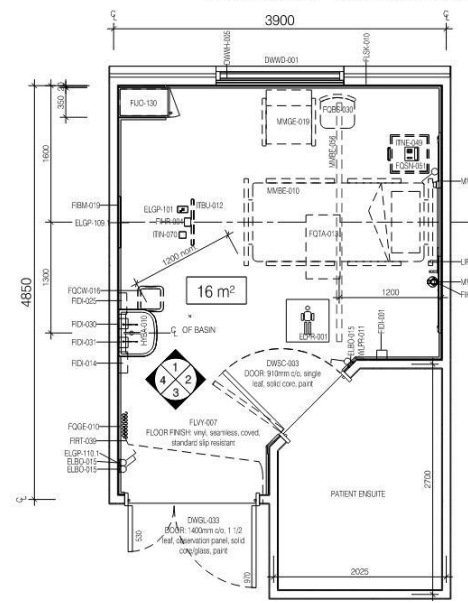


CODE	DESCRIPTION	CODE	DESCRIPTION
CLGP-001	CEILING plasterboard, subhead, pane	FOIA-013	TABLE overbed
DWPR-005	DOOR PROTECTION, protection plate to 900 AFFL	HTBA-010	BASIN, handwash, Type B
DMWD-001	BLIND, standard	DPTK-003	TRAPSOLE, clear, above-basins
DWWR-006	WINDOW	TBLU-012	DISPLAY SCREEN, patient entertainment system
ELSD-015	SWITCH, light, single	RCL-004	BUTTON, nurse call, emergency
ELGP-001	GPO, single, ceiling mounted	RCL-006	BUTTON, nurse call, patient to staff
ELGP-106	GPO, single, on services panel	RCL-008	BUTTON, nurse call, staff assist
ELGP-003	GPO, single, wall mounted (V)	RCL-008	INTERCOM, nurse call, with patient to staff call button
ELGP-103.1	GPO, single, wall mounted, cleaner vertical	TRN-003	OUTLET, data, double RJ45, on services panel
ELGP-102.1	GPO, emergency power, single, on services panel (V)	TRN-010	OUTLET, MATV
ELGP-306.1	GPO, double, wall mounted (V)	TRC-006	TELEPHONE, handset, desktop
ELPA-001	SOCKY PROTECTED ELECTRICAL AREA	LFX-011	LIGHT, reading light
ELR-006	PCR, resuscitation device	LFX-017	LIGHT, night light
PBM-019	WHITEBOARD, board, magnetic	MSAS-002	OUTLET, medical air (MAL), on services panel
PID-001	DISPENSER, alcohol based hand rub	MSAS-002	OUTLET, oxygen (O2), on services panel
PID-014	DISPENSER, disposable glove	MSFP-002	FLOWMETER, medical air
PID-025	DISPENSER, paper/towel/towel	MSFP-004	FLOWMETER, oxygen
PID-003	DISPENSER, soap, antiseptic	MSBE-010	BED, patient, electric with mattress
PID-001	DISPENSER, soap, antiseptic	MSBE-006	LIFTER, patient, ceiling mounted, track linear
PRH-004	BRACKET, for display screen, ceiling mounted	MSMG-000	ADAPTER, suction
PRH-010	BRACKET, for suction bottle	MSMG-019	CHAIR, patient
FLD-100	CURTAIN, 1st, single door, adj. shelves and cornice rail	MSMG-100	SECTION, SOTILE
PRF-009	TRUCK, curtain, privacy, 2 shaped, angled	MSWP-020	SERVICES PANEL, wall mounted
PLS-010	SKIRTING, vinyl, floor vinyl covers, 150H (underneath)	WLPN-001	WALL PROTECTION, bed protection wall panel
PLP-001	FLOOR FINISH, vinyl, seamless, covered, standard slip resistant	WLPN-011	WALL PROTECTION, counter guards, to 900 AFFL min
QDS-000	CHAIR, visitor, patient	WLRW-004	WALL FINISH, paint, acrylic, washable
QDS-010	INK, waste, general, 0.5L	WLRW-010	WALL FINISH, speckleback, vinyl
QDS-010	CURTAIN, privacy screen		
QDS-001	LOCKER, 2 drawers, open under, lockable, mobile		

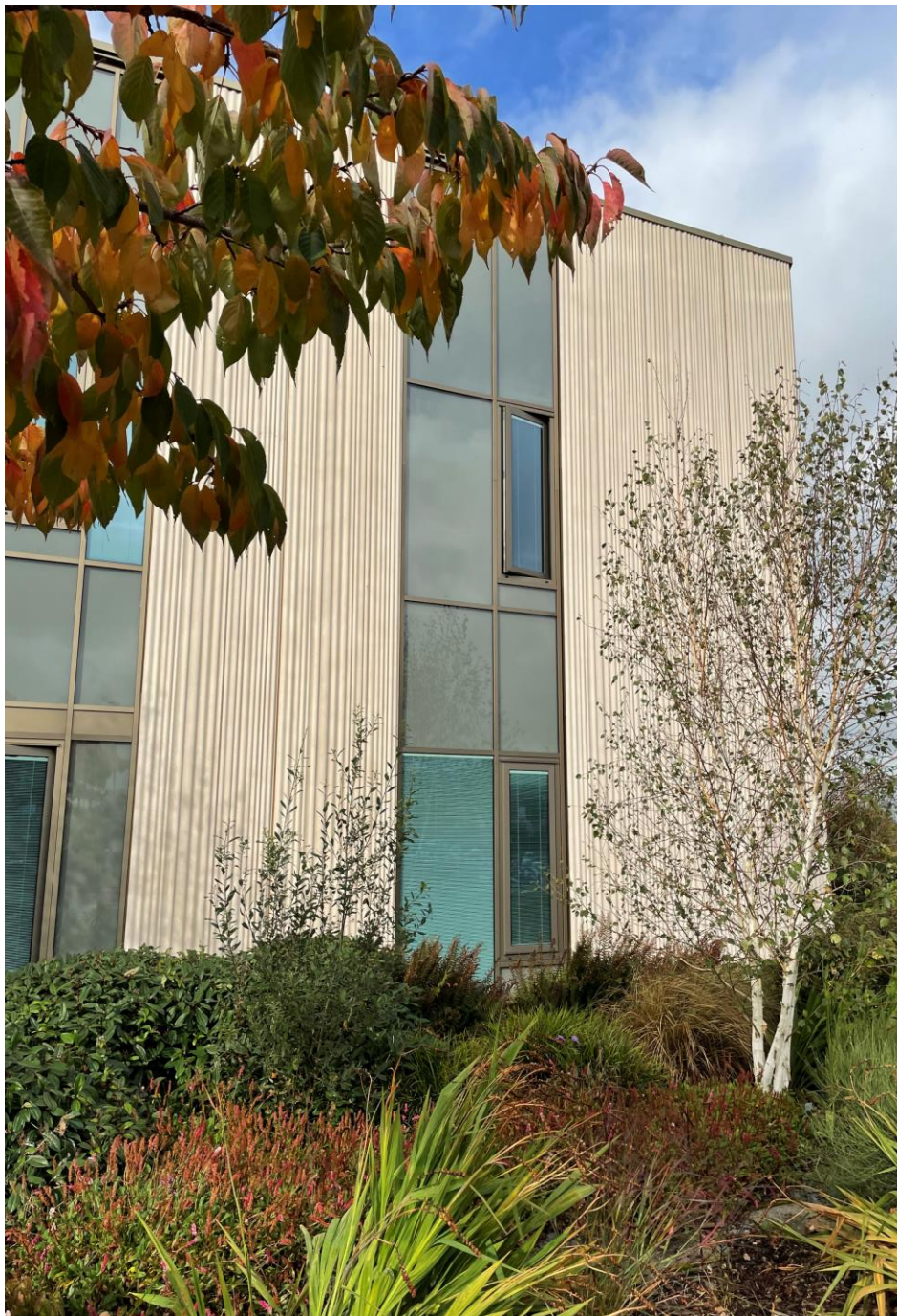


ELEVATION 5 (1 : 25 @ A3)

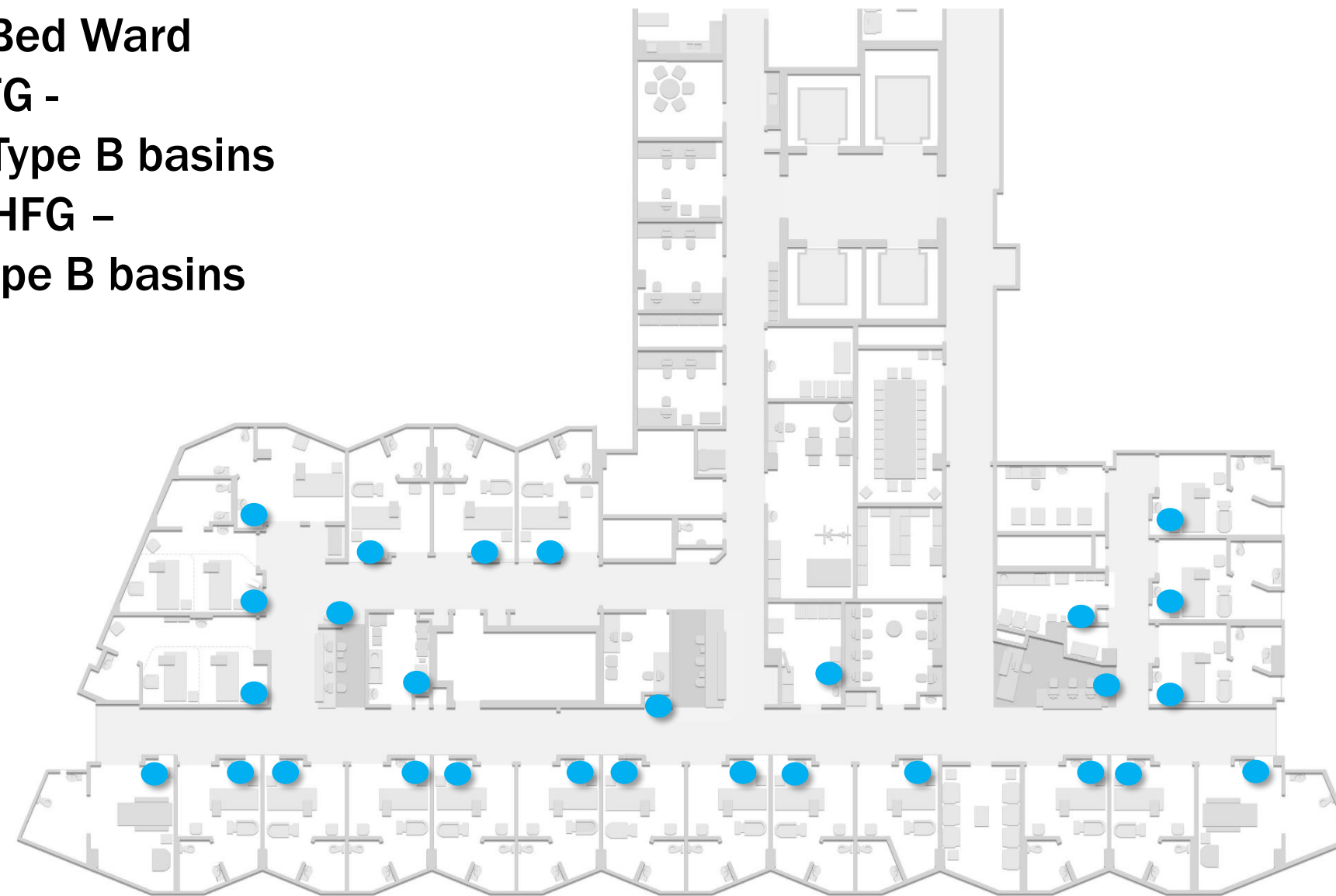
Room Name: 1 BED ROOM - INBOARD ENSU



PLAN
BASED ON 1BR-ST-A2



24 Bed Ward
AHFG -
28 Type B basins
WAHFG -
8 Type B basins



**BETTER
COMMUNICATION**

 **AUSTRALIAN HEALTH DESIGN COUNCIL**



 **Doctors for the
Environment
Australia**

 | **ACIPC**
Australasian College
for Infection Prevention and Control



 **AustIFG**


CIBSE

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THANK YOU