IBI HEALTHCARE+

Healthcare is adapting to the pace of human life.

There is a rising expectation for quality healthcare solutions that are also affordable. Shifting demographics and vast medical advances are pushing healthcare experts to develop new models of care.

In short, healthcare delivery models are becoming more on-demand. At IBI Group, we believe in delivering healthcare closer to home, in an accessible, and affordable way.

Hospital

Right care, right place, right time.

In the on-demand world we live in, design has now become the primary tool by which we can encourage health and well-being in any environment.

We enable well-being within and beyond the hospital walls.

RE-IMAGINING THE PATIENT EXPERIENCE

People have more choice in the ways they access health services today. Many are proactively contributing to their own care management and preventative health services. Proactive providers are now working alongside patients and their families to create individual care plans across a variety of health settings, improving both outcomes and access.

SHAPING HEALTHIER COMMUNITIES

Healthcare facilities play an important role in the community. As the emphasis shifts from 'healthcare' to 'well-being,' this importance is extending beyond the walls of healthcare settings to embrace our wider communities and the way we live our lives. Whether designing a building, or planning a city, we focus on creating spaces that are rooted in their surroundings, and contribute to social and economic well-being.

IMPROVING THE HUMAN CONDITION WITH TECHNOLOGY-DRIVEN DESIGN

Advances in medical and pharmaceutical technology have enabled major break-throughs in treatment, both saving lives and extending them. Our team works to digitally integrate healthcare environments. We believe that the healing environment is one which uses technology-driven design to improve the human condition.

At IBI, we bridge the gap between design and technology.

From 'Fitbits' to machine learning, technology is changing how we engage with the built environment and think about well-being.

WHAT'S THE + IN HEALTHCARE+?

We are living in the age of intelligent processes and artificial neural networks. Designing for a future that is healthy, and ultimately promotes well-being, IBI is creating tangible, technology-driven design solutions for healthcare providers.

By utilizing data already available in the healthcare system, IBI connects the grid directly to patients. With an expert knowledge of predictive analytics, Software as a Service (SaaS), and information exchange, we embed solutions into our designs of facilities, equipment, and products in order to create a more informed healthy space.

Artificial Intelligence is achieving rapid adoption in healthcare.

Improving patient outcomes is the critical mission of all healthcare providers. Artificial Intelligence (AI) allows healthcare systems the opportunity to reduce treatment costs, eliminate unnecessary procedures, and focus on providing better care at the right place and the right time.

Data is changing design.

With the adoption of machine learning comes a level of data and predictive analytics that has never been seen before. IBI is bringing systems thinking to the forefront of design in order to provide a healthcare reality that is efficient, agile, and future-ready.

But not all intelligence is artificial.

We're digital strategists and integrators. After all, technology is only as good as the people implementing it. That's why our team is made up of architects, designers, planners, engineers, and strategists. We believe in creating solutions that work for clinicians and patients alike, be it digital or physical.

Great design encourages healthy lifestyles.

IBI GROUP **DEFINING THE CITIES OF TOMORROW**

IBI

Photos by Infinite 3D

QUEEN ELIZABETH UNIVERSITY HOSPITAL & ROYAL HOSPITAL FOR CHILDREN GLASGOW, SCOTLAND, UK ● AWARDS 🍃 GREEN
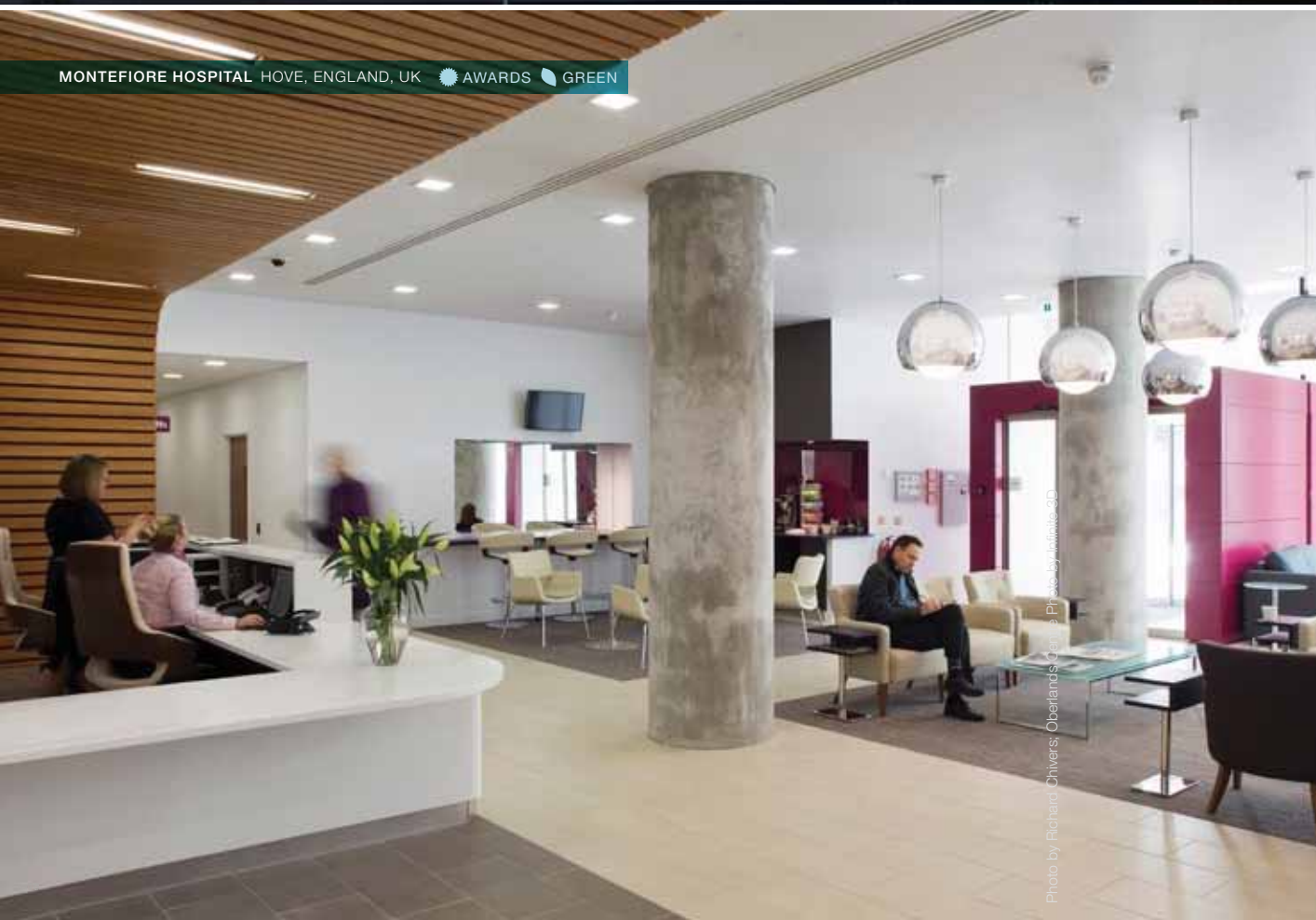
MCGILL UNIVERSITY HEALTH CENTRE MONTREAL, QUEBEC, CANADA AWARD

Photos by Claude-Simon Langlois

Lustre by Nicolas Baier

MONTEFIORE HOSPITAL HOVE, ENGLAND, UK AWARDS GREEN

Photo by Richard Chivers; Oberlands Centre Photo by Aurelien Cecconi

OBERLANDS CENTRE GUERNSEY, ENGLAND, UK AWARDS

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SIR ROBERT OGDEN MACMILLAN CANCER CENTRE HARROGATE, ENGLAND, UK AWARDS GREEN

WOMEN'S COLLEGE HOSPITAL TORONTO, ONTARIO, CANADA AWARDS GREEN

ROYAL HOSPITAL FOR NEURO-DISABILITY LONDON, ENGLAND, UK

BC WOMEN'S AND BC CHILDREN'S HOSPITAL ORTHOPAEDICS & RADIOLOGY CLINIC VANCOUVER, BC, CANADA

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SAN JOAQUIN COMMUNITY HOSPITAL CANCER CENTER BAKERSFIELD, CA, USA ● AWARD ● GREEN

BOLTON ONE INTEGRATED COMMUNITY FACILITY BOLTON, ENGLAND, UK ● AWARDS ● GREEN

YSBYTY ALLTWEN HOSPITAL WALES, UK ● AWARDS ● GREEN

THE GRETA & ROBERT H.N. HO PSYCHIATRY & EDUCATION CENTRE NORTH VANCOUVER, BRITISH COLUMBIA, CANADA
AWARDS GREEN

Photo by Bob Matheson, Croydon University Hospital Dementia Ward Photo by Richard Chivers

CROYDON UNIVERSITY HOSPITAL DEMENTIA WARD LONDON, ENGLAND, UK

TAMESIDE HOSPITAL TAMESIDE MACMILLAN CANCER UNIT TAMESIDE, ENGLAND, UK AWARD

Photo by Jill Tate, St. Wilfrids Hospice Photo

ST. WILFRIDS HOSPICE EASTBOURNE, ENGLAND, UK AWARD

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Photo by Richard Chivers Ka...

Photo by Cilo Dazze

KAISER PERMANENTE IT PASADENA, CALIFORNIA, USA

ER PERMANENTE

MERCY SOUTHWEST HOSPITAL BAKERSFIELD, CALIFORNIA, USA Joint Venture with KMD Architects

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Photo by...

Design for well-being can go beyond the hospital walls.

HEALTH AT HOME

The stress of modern life has a well-documented impact on health, and there is now an increased focus on preventative health and holistic well-being. Humans evolved by adapting to necessity; and, in a time-starved society, we must emphasize individual and family health at home. This will not only help embed well-being into the wider community, but it will also drive improvements in the clinical delivery of health services.

HEALTH IN THE PUBLIC REALM

The evolving nature of community and primary care brings together a range of co-located public services that are delivered outside traditional institutions such as hospitals and clinics. These services require an intelligent approach to design that produces efficient and flexible spaces that are as innovative as they are practical.

HEALTH IN DIGITAL SPACES

Digital health has long augmented institutional care through tele-health and tele-medicine. Today, healthtech, e-health, robotics, virtual reality, and smart phones are extending healthcare into our personal spaces and reframing those spaces in new terms. We are dedicated to the notion that digital health can also contribute to more accessible, equitable institutions, and by extension, healthy, resilient communities and cities.

Health at Home

Health Haus – A Model for New Living

Health Haus is a research and development piece by IBI that seeks to examine how evidence-based design housing solutions can support well-being, and play a pivotal role in supporting sustainable healthcare systems. Assembling a home from pre-fabricated components, *Health Haus* is a concept that harnesses new, technological developments, and positive governmental initiatives. Seeking to provide cultivable gardens, access to natural light and ventilation, the *Health Haus* is a sustainable home that promotes healthy living.
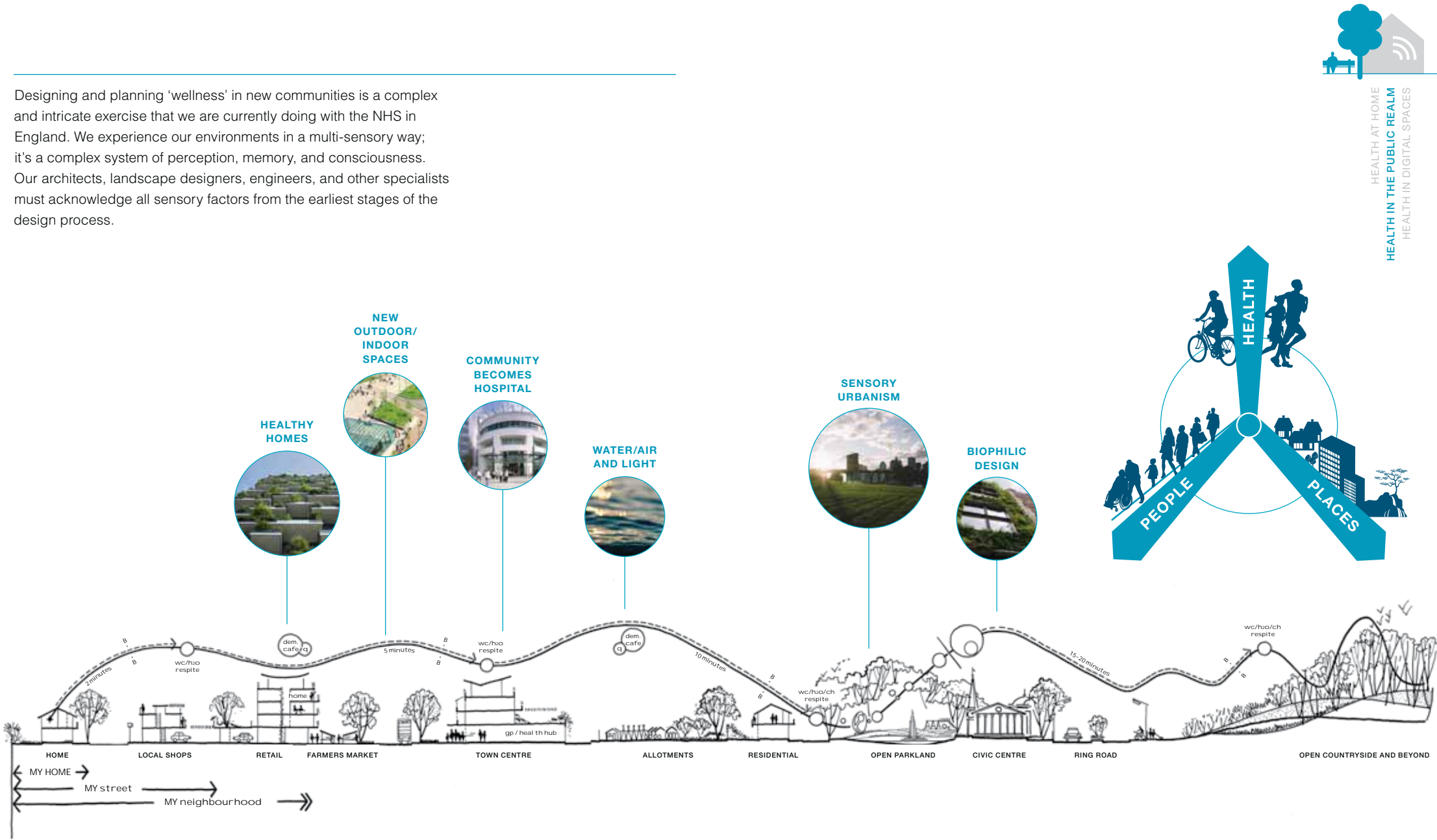
Health in the Public Realm

Healthy New Towns – Redefining Wellness in a Community

Designing and planning 'wellness' in new communities is a complex and intricate exercise that we are currently doing with the NHS in England. We experience our environments in a multi-sensory way; it's a complex system of perception, memory, and consciousness. Our architects, landscape designers, engineers, and other specialists must acknowledge all sensory factors from the earliest stages of the design process.

HEALTHY HOMES

NEW OUTDOOR/ INDOOR SPACES

COMMUNITY BECOMES HOSPITAL

WATER/AIR AND LIGHT

SENSORY URBANISM

BIOPHILIC DESIGN

HEALTH

PEOPLE

PLACES

wc/h₂o respite

dem. cafe q

5 minutes

wc/h₂o respite

dem. cafe q

10 minutes

wc/h₂o/ch respite

15-20 minutes

wc/h₂o/ch respite

2 minutes

home

gp / heal th hub

HOME   LOCAL SHOPS   RETAIL   FARMERS MARKET   TOWN CENTRE   ALLOTMENTS   RESIDENTIAL   OPEN PARKLAND   CIVIC CENTRE   RING ROAD   OPEN COUNTRYSIDE AND BEYOND

MY HOME
MY street
MY neighbourhood

Health in Digital Spaces

Navigator – Yes, We Have an App for That

During a recent innovation challenge, IBI created a wayfinding and user navigation solution for patients within any healthcare system. *Navigator* is an application that works much like a transit planner system. *Navigator* helps patients map out travel to any healthcare facility and lists specific information such as parking locations, cost for parking, and transit alerts. Not only does the application allow for street routing, but it also accounts for in-building routing utilizing building sensors.

Before even entering the building, *Navigator* offers real-time check-in to patient appointments with wait times being updated every minute. For healthcare providers, this type of access reduces missed appointments, and opens up a direct, real-time line of communication to the patient looking for treatment.

Currently, *Navigator* is being tested in select healthcare systems in North America.

Invested in Innovation

IBI TH!NK is responsible for encouraging, capturing, and developing the intellectual capital vested in IBI Group's projects, people, and processes.

Advances in medical science and technology are enabling us to live longer, healthier lives. We recognize that keeping pace with these rapid changes means anticipating future needs. That's where our TH!NK network comes into play. By capturing great ideas across all of IBI's expertise, we are able to connect the dots between how people live, work, learn, heal, and play.
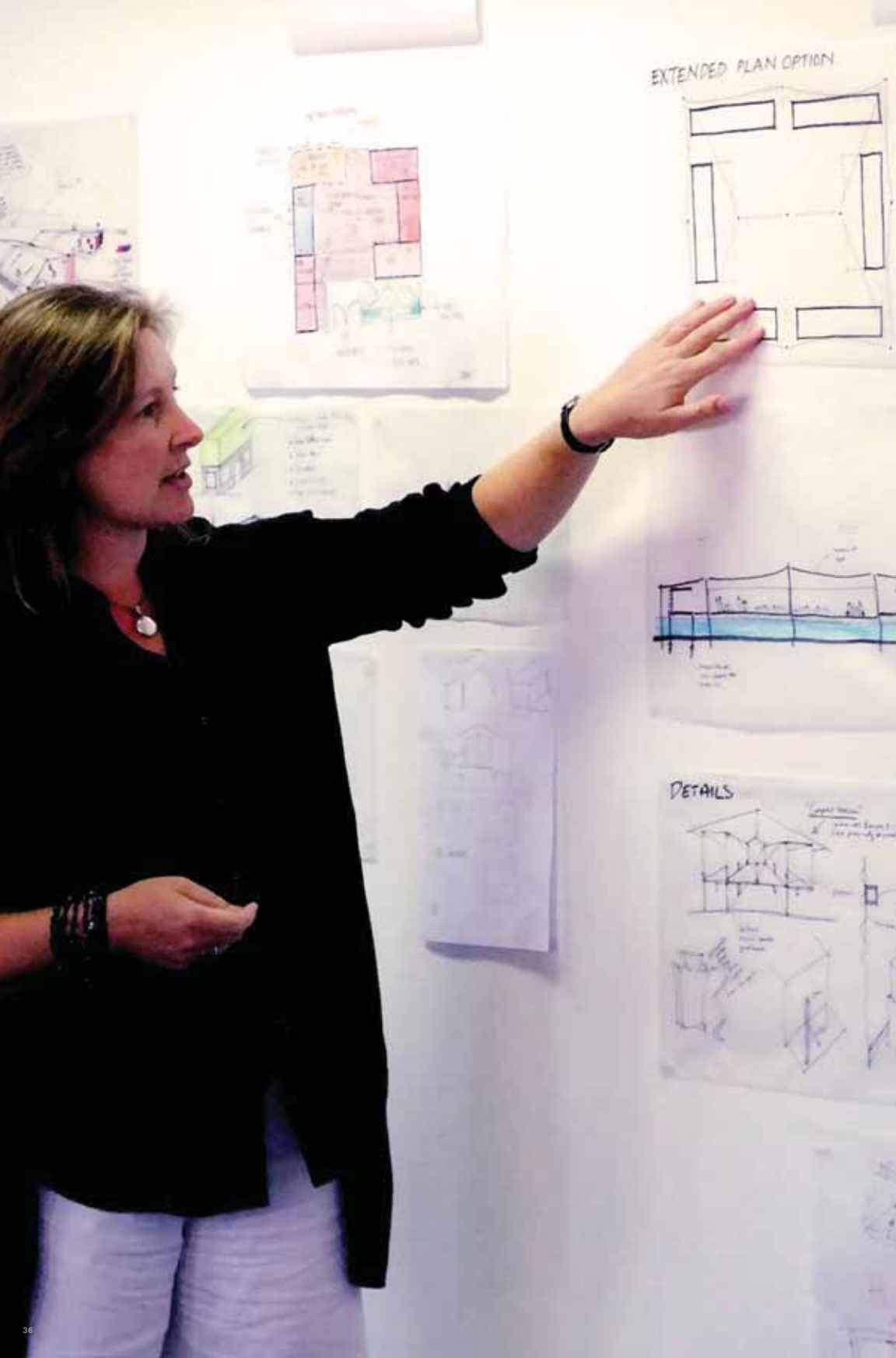
The Power of Evidence-Based Design and Predictive Analytics

Our designs are based on evidential decision making, and regularly developing, testing, and evaluating new ideas.

HEALTHCARE STRATEGIES AND GUIDELINES

Over the last 15 years, the IBI Healthcare+ team has carried out extensive research into emerging building theories, concepts, and products. Through participation with the UK Department of Health, our team helped develop national and international Healthcare Strategies and Guideline documents. We have developed unique design tools to assist in defining and delivering optimum healing environments that positively assist in reducing pain, morbidity and risk, and accelerate or reduce recovery periods.
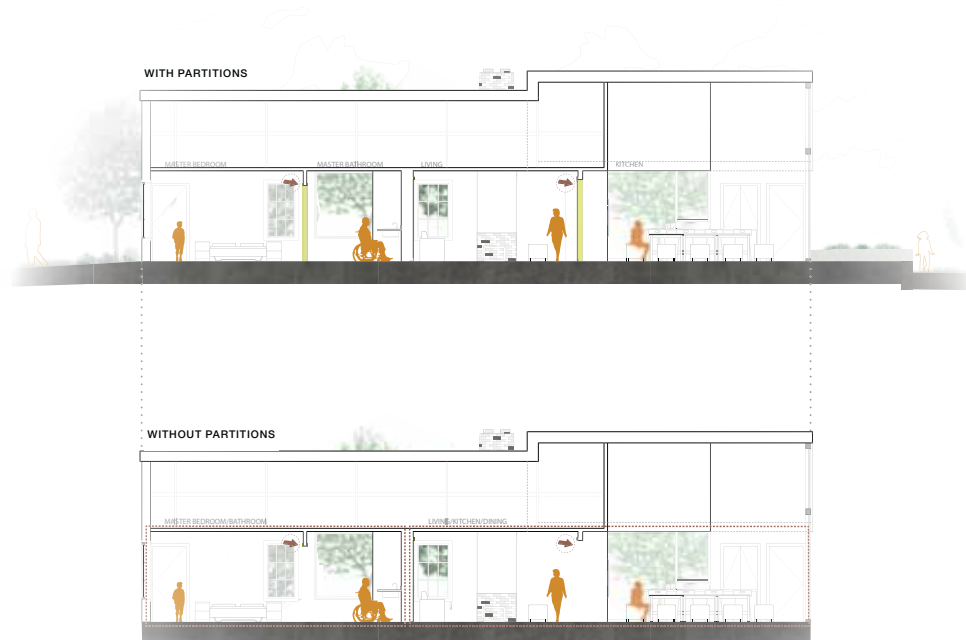
REDUCING BENCH TO BEDSIDE TIME

The tripartite relationship of clinical excellence, academic research, and industry innovation, now has a fourth dimension in today's cities: the citizens and population. Never before has the need to reduce bench to bedside times been more pressing, driving research closer to the community. We see an increasing need to place clinical trials at the heart of the community; to provide research participants with new treatments and therapies; and to give equitable access to the latest treatments for those most in need of them.
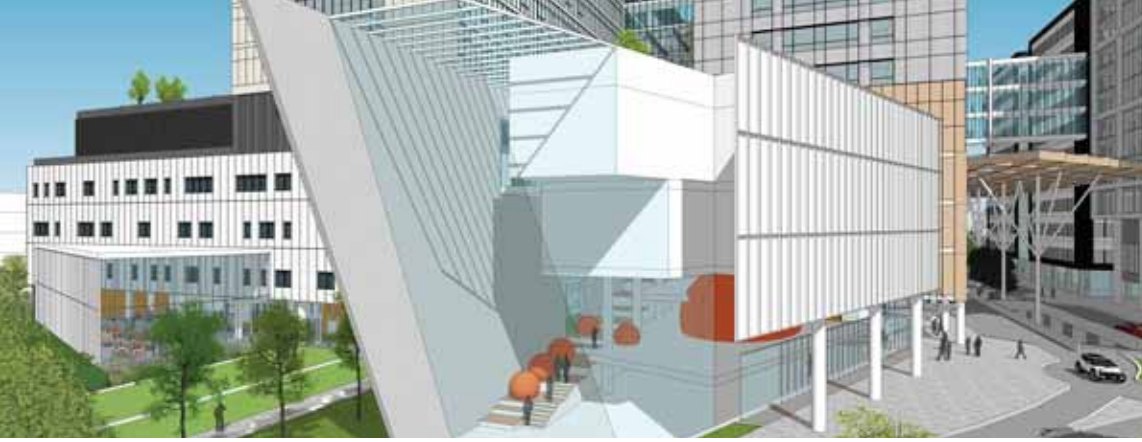
Healthy Aging

Livability isn't about aging, it's about comfort, convenience, safety, and options throughout your life.

THE ACTIVE THIRD AGE: CREATING CITIES THAT THRIVE

By 2050, over 25% of the world's population will be over the age of 65. The population is aging, living longer, and expects better services. How do we create healthier, smarter, and more mobile cities? We're designing a future that enables all ages to thrive. Working as strategists, IBI is blurring the lines of living and healthcare to create healthy communities. In our recent competition with the American Association of Retired Persons (AARP), IBI prototyped a new type of home that allows people to age in place. We're creating new models of care beyond the hospital and embedding health into city placemaking.

WITH PARTITIONS

MASTER BEDROOM   MASTER BATHROOM   LIVING   KITCHEN

WITHOUT PARTITIONS

MASTER BEDROOM/BATHROOM   LIVING/KITCHEN/DINING

Partnering for a Better Healthcare Future

TEAMING WITH ACADEMIA IN RESEARCH

It's in places of collision that great ideas are born. Further, great ideas become game changing realities when tested and proven in places conducive to rigorous exploration.

With a successful track record of collaborating with research institutions and universities, we create new solutions for healthcare providers. Be it software or product-based, we innovate to turn conceptual ideas into prototypes to be tested and developed.

CREATING PRODUCTS WITH MANUFACTURERS

In conjunction with industry partners recognized as leaders in their fields, we develop new products and materials. Infection control, mis-medication, falls, cancer treatment, dehydration, bereavement, privacy, and dignity are just a few issues our team is addressing through product design and development.

Industry Advancements: IBI Healthcare+

Our team is credited with over 25 innovations within the healthcare design field.

Concepts and products such as the *Barn Operating Theatre* (pictured here), the *Cruciform 4 Bed Bay*, and the *Norbury Lounge Chair* are just a few of the evidence-based led innovations completed by our team. As healthcare spaces continuously and quickly adapt to new levels of technology, one of the largest expenditures has become equipment. With an ultimate goal of lowering costs, yet improving outcomes for people, health systems are looking to designers who understand how to create efficient and effective equipment that delivers maximum results.

THE BEDPOD DESIGN

A pre-fabricated, rapidly deployable product, the BedPod design can be used permanently or temporarily to create private bed spaces in a multi-bed ward environment. SAS International, IBI Group, and Billings Jackson worked together to develop this rapidly deployable plug-in bed. It is currently installed in three hospitals with post-occupancy evaluation now completed.

RESEARCH AND ANALYSIS
STRESS
ANXIETY
COLD/FLU
SLEEP DIFFICULTIES
DEPRESSION

INFLUENCING FACTORS
SOCIAL INTERACTIONS
PHYSICAL ACTIVITY
ELEMENTS OF NATURE
FAMILIAR ENVIRONMENT
SAFETY
DIET

DESIGN RECOMMENDATIONS
OPEN SPACE
PLANTING/GARDENS (COLOUR, FRAGRANCE, SHADE)
COURTYARDS (VARIOUS SIZES)
STREETSCAPE (SHADE)
TRAFFIC CALMING
LIGHTING (DAY AND NIGHT)
FLOWING WATER (NOISE)
CONNECTIVITY (WALKING AND BIKING)

OUTCOMES

1
Vegetation and natural elements improve cognitive function, concentration, and reduce depressive mood and aggression.

2
Green space creates pleasant/calming views, a framework for social spaces, and hardscape connections.

3
Small gathering spaces give intimate space for social interactions or meditation and can reduce stress.

4
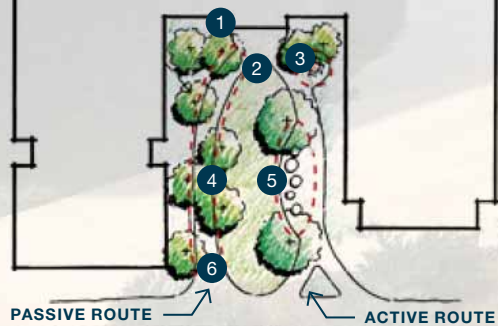Trees provide shade along the path. This encourages walking and protects from harmful UV rays.

5
Medium gathering spaces are for small numbers of students and informal gathering/socialization.

6
An alternate route without gathering spaces can reduce stress.

TYPICAL HEALTHY COURTYARD

PASSIVE ROUTE   ACTIVE ROUTE

Research-led
Innovation

THERAPEUTIC LANDSCAPES AND NATURAL BENEFITS

IBI's planning and landscape architecture practice partnered* on a new process called the Health Design Assessment™ (HDA). The HDA is a process that examines both quantitative and qualitative local health data, and then interprets this data to guide planning and design decisions. Using the HDA when planning for built environments has the potential to mitigate negative health issues for people interacting within the space. The HDA has also been utilized to pursue certain health-related grants and funding options.

*with Planning4Health Solutions

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Smart City models make well-being proactive.

The development of healthier, more empowered communities within a smart city creates a better work/life balance, with more options for healthy lifestyle choices.

Smart Healthcare design begins with healthcare strategy. The Smart City model offers a way to improve the quality of city life through the incorporation of technology and intelligent systems into the design of both physical and human infrastructure. This change facilitates the move from a reactive process of treating people when they become sick to a more proactive 'well-being' agenda.

Drawing on our expertise in healthcare strategy, architecture, urban planning, transportation, and intelligent systems software, we are ideally placed to take a leading role in the planning and delivery of future healthcare and well-being in the Smart Cities and healthy communities of tomorrow.

☺

IBI Healthcare+ is a centre of excellence within IBI Group focused on enabling well-being within and beyond hospital walls.

IBI Group is a global team of dedicated and experienced architects, engineers, planners, designers, and technology professionals who share a common desire – to help our clients create livable, sustainable, and advanced urban environments.

IBI has over 60 offices located in major urban centres across North America, the Caribbean, Europe, Middle East, and Asia.

SECTORS

INTELLIGENCE
SOFTWARE
SYSTEMS DESIGN
SYSTEMS INTEGRATION

BUILDINGS
ARCHITECTURE
INTERIOR DESIGN
MECHANICAL, STRUCTURAL, AND ELECTRICAL ENGINEERING

INFRASTRUCTURE
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
PLANNING
TRANSPORTATION
URBAN DESIGN

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