



HSE Capital & Estates Strategy

2022-2050

Management

Property

Strategy





**The HSE
Capital & Estates Strategy
sets the direction for the future
management, development and
investment of the healthcare
estate in Ireland.**



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1 Introduction

1.1 Rationale for a Capital & Estates Strategy

The Capital & Estates Strategy (“*the Strategy*”) is an essential enabler to providing safe, secure, high-quality healthcare infrastructure, which can support current and future service needs, setting out a clear strategic direction for the future management and development of the estate.

Currently, the HSE develops a Capital Plan for the HSE Board and Ministerial approval on an annual basis. This Plan looks forward for a period of one year, and is prepared in the context of the, typically five-year, Government National Development Plan (NDP) and the HSE three-year Corporate Plan.

The key issues that the Property Strategy is aiming to address can be summarised as:

1. **The need for a costed and funded longer-term strategic plan** - The HSE requires a longer-term costed and funded capital strategy and programme to deliver a fit for purpose estate, aligned to national clinical objectives and supporting service requirements.
2. **The requirement for a national framework for investment decisions** - The approach to capital investment is often responsive, aligning more often with operational requirements but lacking a national framework for investment decision making, to the detriment of medium-to-long term transformational programmes.
3. **Time and cost pressures** – There are on-going pressures in delivering capital projects on-programme and on-cost. These pressures will be further exacerbated with estimated labour shortages and on-going supply chain challenges in the construction sector affecting capability to deliver the Capital Plan.

This Strategy aims to address these issues by setting out a strategic direction of travel with a clearly articulated desired end-state, with objectives and actions to drive its achievement. This is essential and practical given:

- The growing population, changing demographics and increasing demand for access to healthcare;
- The changing models of care and the increases in complex conditions and chronic diseases;
- The need to provide more care in the community and be less reliant on acute hospital services;
- The development of a Strategic Health Investment Framework (SHIF) by the Department of Health;
- The requirement to comply with the decarbonisation obligations set out in the Government’s Climate Action Plan and Climate Action legislation;
- Policy implications and recommendations of the Irish Government Economic and Evaluation Service (IGEES) Health Care Capital Investment in Ireland, Spending Reviews (December 2021);
- The requirement for better links to wider Government policies, such as Transport and Housing for All;

1.2 Scope of the Strategy

The scope of the Strategy is to have a longer-term perspective (2022-2050) of the estate, incorporating reviews at five yearly intervals with an early review after the first year. The overarching objective of the Strategy is to support the delivery of key HSE strategic priorities, in relation to the development of its property portfolio, and the ambition to achieve net zero carbon no later than 2050.

The Strategy focusses specifically on property and estate. A previous medical equipment strategy has been published and will be updated as necessary to align with this Strategy.

1.3 Approach and methodology

The HSE recognised the requirement for a Capital & Estates Strategy from a corporate and strategic perspective and established a working group to develop the Strategy, overseen by a Steering Group, which included representatives from the Department of Health.

As part of the process, five workstreams were assigned to inform the Strategy’s development:



‡ to be aligned to the Department of Health’s SHIF.

Significant consultation took place as part of the initial strategy development phase. Several workshops and presentations to stakeholders were undertaken over an intensive period, with vital contributions from Capital and Estates, Department of Health, Health Regulators, and clinical input from representative stakeholders within acute, primary care and community services.

Over 50 people participated in the development of the Strategy, and 35 written submissions were received as inputs to the key drivers for change. Patient representatives participated as members of the HSE Strategy and Research Team. Research was also completed, and international standards considered and adopted, where applicable, to underpin the Strategy recommendations. This detail is presented in a supporting addendum to the Strategy.

The Strategy is structured as follows, addressing:



Section 2 considers the current legislative, strategic, and organisational context for the Strategy. It includes a summary of the ongoing estate surveys and the challenges with the current traditional approach to property management and development of the healthcare estate in Ireland.

Section 3 considers the key drivers for change that must be considered when planning and investing in the healthcare estate. It also details the “desired end state” and anticipated benefits from implementing this Strategy.

Section 4 presents the strategic objectives, actions and change approaches, principles of implementation and risks associated with delivery of the Strategy.

[The final Strategy document was approved by the Executive Management Team of the HSE, and subsequently approved by the Audit and Risk Committee and the HSE Board].

2 Where are we now?

This Section considers the key legislative, strategic and organisational context for the Strategy. It also provides a summary of the ongoing estate surveys and the challenges with the current traditional approach to property management and development of the healthcare estate in Ireland.

2.1 Strategic context

The policies, legislation and national strategies summarised below are an important backdrop to the future of healthcare estate.

In particular, policy is a key driver for change which is considered in more detail as part of the “where do we want to be?” section of the Strategy.

2.1.1 Sláintecare Implementation Strategy and Action Plan 2021-23

The Sláintecare Implementation Strategy identifies capital investment as a critical enabler of the reform proposed in Sláintecare, acting as a catalyst for implementation of a revised model of care, improving the capacity of the health service and the modernisation of service delivery.

Key projects highlighted in the Sláintecare Implementation Strategy that are relevant to capital development include the delivery of elective hospitals, implementation of Regional Health Areas, introduction of a population-based approach to service planning and funding and implementation of the recommendations of the Health Service Capacity Review (2018).

2.1.2 National Planning Framework National Development Programme (Project Ireland 2040)

Project Ireland 2040 is the overarching policy and planning framework for the social, economic and cultural development of the country. This capital programme underpins significant public investment in health infrastructure to meet current needs, cater for an estimated population increase of one million people and to respond to Ireland’s changing demographic profile. It also supports the realisation of a high quality, safe, accessible and sustainable healthcare system.

2.1.3 Climate Action Plan 2021 and Low Carbon Development (Amendment) Bill 2021

The *Climate Action Plan 2021 and Low Carbon Development (Amendment) Bill 2021* requires Ireland’s transition to Net Zero Carbon, and a climate neutral economy, no later than 2050. To achieve this target and reduce environmental impact through a process of decarbonisation, the HSE estate will require significant modification and redevelopment. Initial plans in this regard are set out in the HSE *Infrastructure Decarbonisation Strategy and Implementation Roadmap*.



2.1.4 Spending Review 2021 – Healthcare Capital Investment in Ireland

In December 2021 the Department of Health and the Irish Government Economic and Evaluation Service (IGEES) released the following three reports on healthcare capital investment spending in Ireland:

1. *Analysis of Historical Capital Investment in Healthcare;*
2. *Strategic Considerations for Future Capital Investment in Healthcare;*
3. *Dealing with Uncertainty and Risk: The Application of Reference Class Forecasting to Future Capital Investment in Healthcare.*

Summary points of note from these papers that have informed this Strategy are:

- A requirement for centralised strategic direction for healthcare capital investment;
- Capital investment should be implemented in a more consistent and steady-state manner, to avoid large fluctuations in expenditure programming;
- The need for competitive internal prioritisation of potential infrastructural investment projects, within a Strategic Investment Framework, to deliver on the NDP objectives in healthcare;
- Within the total available health budget, growth in current expenditure has been prioritised over capital expenditure, which has historically equated to a small part of the total spend;
- Further development of data and evidence related to healthcare capital investment is required;
- New healthcare infrastructure projects often fail to be adequately integrated into the overall health system, with appraisal of projects often evaluating performance in the context of a certain care setting, rather than the effect on the system as a whole;
- Healthcare projects are often insufficiently flexible to incorporate changes in delivery of care, highlighting a need for more flexible architecture which can adapt to the varying technical lifespans of different components of a hospital or residential facility.

2.1.5 Public Spending Code

The Public Spending Code obligates all Irish public bodies to treat public funds with care, and to ensure that the best possible value for money is obtained whenever public money is being spent or invested. In executing this Strategy, it will be essential for the HSE to optimise the use of its funding allocations to maximise the return from investment made in the healthcare estate.

2.1.6 HSE Corporate Plan 2021-24

The HSE Corporate Plan for 2021-2024 sets out a vision and strategy for service delivery and outlines the aims of the HSE for the period. The transformation described in the Corporate Plan focuses on enabling the delivery of Sláintecare by moving care from a hospital to community setting, addressing access to care and ensuring value for money.

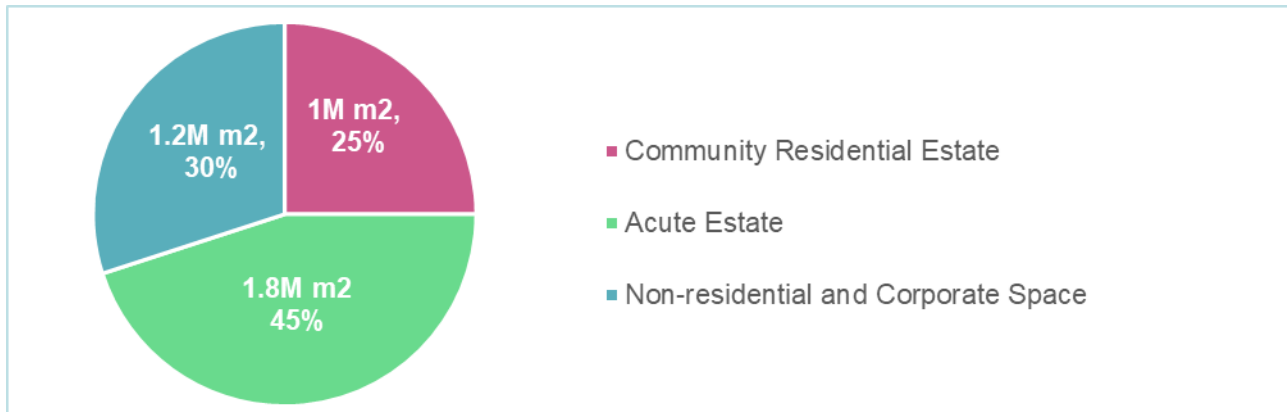
The Corporate Plan provides the context for necessary capital developments in primary, community and acute settings, including the construction of new and expanded facilities.



2.2 Overview of the healthcare estate in Ireland

The total healthcare estate comprises approximately four million square metres dispersed across an estimated 2,500 sites (including acute voluntary buildings), as shown below:

Figure 1: Breakdown of estate type



The buildings, spread across 70,000 km² of geography, range in age from pre-18th century to facilities built post-2010. Ownership of the estate is made up of circa 67% state-owned freeholds and 33% leaseholds.

The HSE is currently carrying out condition surveys of the estate. At the time of writing, approximately 50% of the overall estate had been surveyed (primarily acute sites). The completed surveys have given a sufficient indication of the current baseline to inform the development of this Strategy. The remaining estate is intended to be surveyed as part of the Strategy’s implementation programme of work.

It is evident from the completed surveys that, in general, a large proportion of the estate is outdated and not keeping pace with current standards for providing clinical services. A high-level summary of key findings is presented in the table below. Detailed survey findings are provided in the addendum to the Strategy.

Figure 2: Summary of estate surveys completed to date (primarily acute sites)

Physical Condition	Space Utilisation	Functional Suitability	Quality & Safety
<ul style="list-style-type: none"> » Many wards in poor physical condition throughout; » Older buildings containing wards which are used as access walkways to other areas; » Many buildings with narrow corridors difficult for persons with mobility and disability (community); » Buildings showing signs of age and deterioration (community). 	<ul style="list-style-type: none"> » Additional beds in non-designated areas; » Trolleys on corridors in Emergency Depts; » Use of assessment beds for in-patient care; » Overcrowded out-patient and diagnostic spaces. 	<ul style="list-style-type: none"> » Inappropriate bed spacing, particularly in multi-bedded (community long term residential care); » Lack of en-suite facilities, or insufficient bathrooms for number of beds (community in-patient care); » Lack of sufficient or appropriate size single rooms; » An absence of dedicated isolation facilities. 	<ul style="list-style-type: none"> » Lack of privacy and dignity (community and acute); » Basic facilities such as bathrooms absent or limited for bed numbers; » Corridors used for waiting, assessment or treatment; » Mixed sex rooms due to bed capacity.

A key objective of the Strategy is to protect the quality and value of past and future capital investments via a well informed maintenance and minor capital programme. The estate must be maintained in a safe and operationally sound manner, enabling delivery of quality clinical services. Evidence based estate maintenance and minor capital investment decisions will be enabled from the results of current and future condition survey programmes, ensuring an optimal return on capital funding.

2.3 The current estate management process and its challenges

The current estate management processes have been reviewed to determine if they are sufficient to enable the delivery of an optimal estate portfolio. Key findings across the typical lifecycle stages of estate, from initiation to disposal, are summarised below:

2.3.1 Project Initiation

This refers to the period in a project lifecycle between origin and inclusion in the annual Capital Plan. The stage comprises five steps:

1. **Conceptualisation** – the point that the requirements for a project to support service delivery are formulated. Typically, projects are envisioned locally, developed and then directed for national support. The conceptualisation stage involves determining the need for a project, assembling a business case and detailing the scale of the proposed project.
2. **Submission to National Capital and Property Steering Committee (NC&PSC)** – the membership includes National Directors who represent the various services. The group's function is to review all proposed capital projects and recommend those to be included in the HSE Capital Investment Programme, (i.e. the pipeline of projects).
3. **Consideration for Capital Investment Programme** – this comprises the capital projects recommended by the NC&PSC for delivery across future years.
4. **Prioritisation Process** – the cost to implement the full list of projects in the Capital Investment Programme inevitably exceeds the amount of capital funding available in any year. The prioritisation process seeks to rank each project against set criteria, with capital funding allocated according to ranking until all available funding is accounted for.
5. **Finalisation of Annual Capital Plan** – details how the capital budget is allocated for ongoing and new projects, submitted to the Minister for Health for approval in accordance with the Health Act.

A considerable number of projects are being delivered in acute and community settings. Typically, projects are envisioned locally and while responding to local priority and need, are not necessarily in response to Government/HSE priorities or driving transformational change. The process, whilst operationally responsive, does not necessarily deliver strategically for the medium or longer term.

These types of smaller scale capital project of less than £5 million account for circa 50% of the overall capital plan (FY 2021). Furthermore, the proportion of capital projects of between £5-10 million is c.25%. This leaves a small allocation for strategic capital, which is not sufficient to fund the identified transformational and strategic developments required into the future.

Significant resource is required to plan and deliver these types of projects which increases demands on Capital and Estates Departments. This Strategy sets out a methodology to alter this, seeking to align capital investment planning processes with health policy, the DoH's Strategic Health Investment Framework, population-based healthcare needs analysis, workforce planning, and clinical programmes as detailed in *Section 3* of the Strategy. The objective will be to have a consistent proactive approach to estate investment, development and ongoing maintenance that continuously improves the estate over time.

2.3.2 Project Delivery (Design and Construction)

The commissioning of design and construction services is initiated through procurement processes consistent with public procurement requirements. Capital and Estates currently have frameworks in place for the efficient commissioning of professional design services for projects to the value of

€30m¹. For projects over this value design teams are procured according to national and EU legislation. Contracts associated with the construction of capital projects are awarded following similar legislative criteria.

To enable efficient design delivery, HSE Capital and Estates have developed a comprehensive range of standard schedules of accommodation, room data sheets and specifications for both acute and community facilities, in-line with internationally recognised healthcare standards. Reviews from other jurisdictions indicate these are now being developed further into repeatable, template layouts developed with leading experts containing standard core designs to enable projects move more rapidly through design phases. Template layouts are being designed utilising standard room sizes (8m², 12m², 16m², 24m², 32m² etc) and repeatable grids maximising future flexibility and adaptability of healthcare estate. Also, the use of standard layouts for multiple projects in multiple settings is leading to an optimal return on the feedback and analysis derived from post-project evaluations and lessons learnt reviews.

From a construction perspective, current public works contracting processes do not enable collaborative working. Contractors are appointed after the majority of design decisions have been made, creating a lost opportunity to benefit from their experience and expertise. The contractor can often highlight challenges with the design which can give rise to adversarial scenarios, cost pressures and time delays when identified post tender.

Reviews of project delivery methods from other jurisdictions demonstrate that capital plans delivered in a programmatic, collaborative manner, to scale, using standardised design and construction delivery methods, can yield considerable cost and time efficiencies.

The potential benefits to this change approach are further detailed in [Section 3 Where do we want to be?](#)

2.3.3 Maintenance

The HSE approach to the provision of maintenance services is not standardised. For most of the estate there is a separation of accountability, with Capital and Estates responsible for the delivery of capital projects and the Services (e.g. the providers of the services such as Hospital Groups and Community Healthcare Organisations) responsible for ongoing maintenance. However, accountability is inconsistent and the absence of clarity presents a challenge to the HSE.

The absence of a unified, consistent approach is inhibiting the ability to develop essential maintenance services and the adoption of a common framework for estate maintenance operations. Furthermore, the completed condition surveys have highlighted that the rate of degradation is outstripping the current level of maintenance investment, resulting in a deteriorating estate.

2.3.4 Estate Replacement and Disposal

The current estate is often located where services were originally commissioned, in many instances decades ago. In the intervening period, significant transformation has occurred in for example national policy, clinical models of care, public expectation, population and demographic changes. This has resulted in some elements of the estate no longer being in the right place, or at the right scale or fit for the delivery of revised clinical models.

The current, limited ability to plan longer-term capital investment reduces the ability to develop HSE estate replacement and disposal strategies.

¹ Estimated construction cost (Ex VAT)

2.4 Summary of where are we now

The condition of the current estate is a consequence of how it has been traditionally funded and managed. Historically, the estate has had years of under-investment, reflecting the severe constraints on capital and revenue investment, highlighted in the IGEES Spending Review Papers. Also, current estate management approaches are not conducive to addressing policy drivers, existing challenges and ongoing maintenance liability.

A summary of key issues to be addressed in the Strategy are:

- Ensure a balance between current and capital expenditure, seeking to ensure adequate levels of maintenance funding;
- Meet the current and anticipated future shortfall in estate capacity;
- Link healthcare investment to population health need by care and regional setting;
- Establish a formal and consistent approach to strategic prioritisation of investment;
- Meet Climate Action, Environmental and other legislative requirements;
- Continue to meet the requirements of health regulators, such as the Health Information and Quality Authority and the Mental Health Commission;
- Adopt a data-driven, evidenced-based and programmatic approach to property investment, management and development;
- Establish a more straightforward and standardised approach to building design, creating universal rooms and layouts;
- Streamline procurement of the supply chain for estate investment and development;
- Reduce annual escalation in time and cost associated with current approaches to building and renewal or replacement;
- Create a more flexible and adaptable estate that is resilient to emergencies such as pandemics, extreme weather etc;
- Ensure site development is carried out in a controlled manner;
- Plan for known and future workforce and labour challenges (in as far as possible);
- Consider the opportunities presented by remote working and delivery of care;
- Embrace advancements in digital innovation and construction technologies.

HSE Capital and Estates will take advantage of the opportunities presented by developments in capital and estate management both in healthcare and the wider construction sector. The rationale for developing a sustainable healthcare estate that embraces the drivers for change is detailed in [Section 3 Where do we want to be?](#) while the strategic objectives and change approaches required to address current constraints are outlined in [Section 4 How do we get there?](#)



3 Where do we want to be?

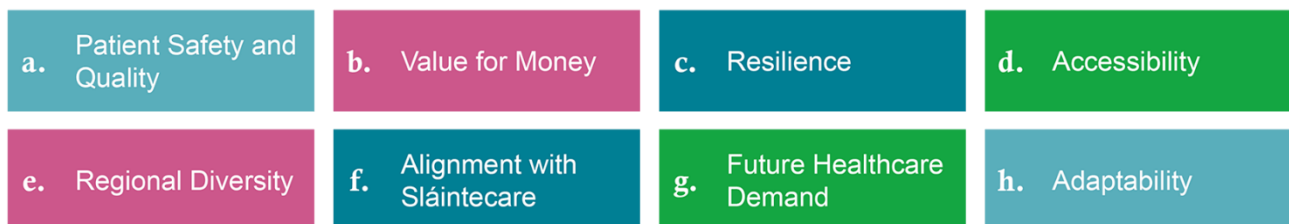
This section of the Strategy sets out:

- firstly the key drivers for change that inform the “Where do we want to be?”;
- secondly the “desired end-state”;
- lastly the expected benefits that this desired end-state will bring.

Resulting from analysis published in the Healthcare in Ireland series in 2021, the Department of Health is developing a Strategic Health Investment Framework (SHIF) to ensure that future health capital funding allocations align with national (i.e. National Development Plan) and sectoral (i.e. Sláintecare) objectives. This will also support agreed principles in the National Planning Framework, underpinned by the National Development Plan.

The SHIF will include multi-criteria analysis, where broad investment proposals will be considered against proposed criterion to provide a comprehensive assessment to support prioritisation and decision making. Development and implementation of such a framework would result in a more transparent and coherent process by which health investment priorities are selected.

Potential criteria have been identified for a SHIF for healthcare and work is underway to develop these in more detail.



One of the issues to be addressed in this Strategy (as cited on page 11 section 2.4 *Summary of where we are now*) is the establishment of a formal and consistent approach to strategic prioritisation of investment, i.e. the development of a Strategic Assessment Framework. The Strategic Assessment Framework (SAF) will align with the SHIF as it evolves.

Key drivers will form an important part of that SAF resulting in a more transparent and coherent process by which health infrastructure investment priorities are selected.

3.1 Key drivers for change

The HSE Vision is for:

“a healthier Ireland, with the right care, at the right time and in the right place”

The following interconnected key drivers for change were identified during consultation and development of this Strategy (incorporating input from clinical and patient representative groups):

- Population;
- Policy;
- Healthy design and health and wellbeing;
- Clinical trends;
- Digital health;
- Design and construction;

- Climate Action and Sustainability;
- Workforce;
- Finance.

3.1.1 Population

Implementing this Strategy will ensure there is a clear link between future healthcare investment and population health needs, by both care and regional setting. Fundamental to this will be the appropriate involvement of stakeholders such as clinical and patient representative groups.

The National Service Plan 2022 was developed in the context of the growth and changing age profile of the population and evolving prevalence of risk factors for illness, as well as the unique challenges posed by the COVID-19 pandemic. By 2036, the overall population will have increased from 5.1m to 5.8m and the percentage of the population aged **under-15** and aged **65-and-over** will have almost reversed from the 2016 position as shown in Figure 4 below:

Figure 3: Summary of forecast population change (<15,>65) 2016-2036

Age range	2016	2036 (forecast)
Under-15	21%	15%
Over-65	13%	20%

The ageing of the population will result in greater prevalence of long-term and chronic conditions requiring appropriate supports. This will affect the type and location of the healthcare estate, requiring care delivery in or closer to patients’ homes and more specialised community facilities.

3.1.2 Policy

Healthcare policy may change relatively quickly and frequently compared with the typically 60+ years design life of buildings. Policy can also have a variety of indirect influences on buildings and contribute to their technical, social, clinical, environmental and financial sustainability.

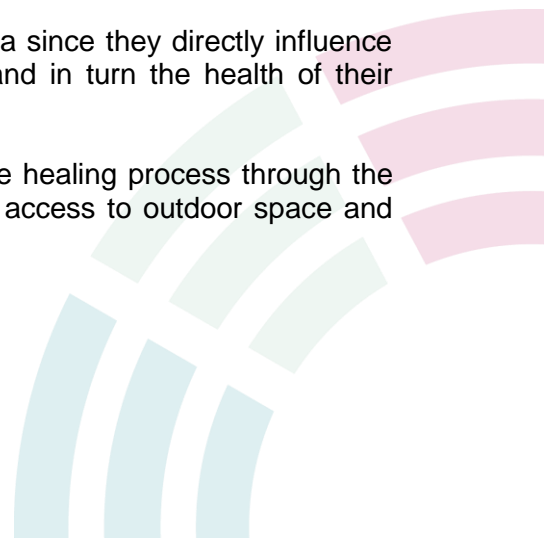
The Department of Health and the HSE have set out objectives in a number of key policy and strategy documents that prepare for ambitious health service transformation that is less building dependant, with services centred in the community and healthcare closer to home. This will be achieved by optimising the use of digital technology such as telemedicine.

Recommendations from existing strategies and policy documents include the integration and reconfiguration of acute and community services into Regional Health Areas, hub and spoke models of care and the concentration of highly specialised, complex care to a number of key hospital sites. The on-going development of the estate will align with these recommendations and become an enabler in the implementation of health policy.

3.1.3 Healthy Design and Health and Wellbeing

Healthy workplaces are central to driving the Healthy Ireland agenda since they directly influence the physical, mental, economic and social wellbeing of workers, and in turn the health of their families, communities and society.

For healthcare environments, the building itself can contribute to the healing process through the use of eco-friendly material, ambient and welcoming surroundings, access to outdoor space and clean air to promote the wellness of those accessing the buildings.



A research report in 2004² set out to establish how hospital design can impact clinical outcomes. The scientific studies document how a range of design characteristics, such as single rooms versus multi-bedded rooms, reduced noise, improved lighting, better ventilation, better ergonomic designs, supportive workplaces and improved layout can help reduce staff errors and reduce stress. The findings also noted improved sleep, reduced pain and requirement for drugs by patients and other improved outcomes.

The research team found rigorous evidence which links the physical environment to patient and staff outcomes in four areas:

- | | | | |
|--|---|---|---|
| <p>1.
Reduce staff stress / fatigue and increase effectiveness in delivering care</p> | <p>2.
Improve patient safety</p> | <p>3.
Reduce stress and improve outcomes</p> | <p>4.
Improve overall healthcare quality</p> |
|--|---|---|---|

The HSE will ensure healthy design that promotes wellbeing, will form part of a standardised approach to the future investment and development of the estate.

3.1.4 Clinical Trends

The health estate will play a key role in helping to respond to clinical trends and advances in clinical provision, such as changes in endoscopy and radiology, a more integrated mental health service, developments in primary care and enhanced community care services, change approaches in surgery, cancer trends, increased need for intensive care, reducing adverse lifestyle trends and provision of multi-professional assessment spaces.

Engagement with HSE Clinical Programmes and wider stakeholder groups will continue, during the implementation phase of this Strategy, as part of developing an estate that aligns with the evolving clinical trends.

3.1.5 Digital Health

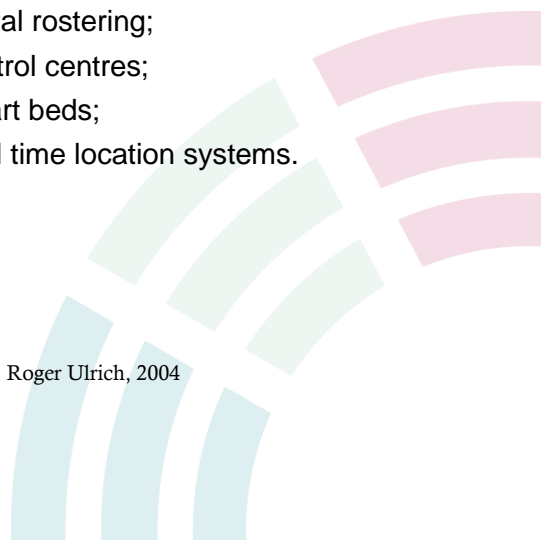
Globally, digitisation is advancing at a considerable pace and enabling significant change to the way healthcare systems build, run and operate health services. Undoubtedly, technology will play a critical role in the future design, construction, and operation of healthcare infrastructure.

This will necessitate developing significant new infrastructure, to take advantage of emerging technology, as constructing new versions of old infrastructure is deemed inadequate to meet anticipated clinical and operational challenges.

Key drivers in digital adoption that impact clinical and estate provision are:

- Smart buildings and artificial intelligence;
- Building information modelling (BIM), digital twins and building management systems;
- Robotics – automated guided vehicles, clinical, cleaning and prescribing robots;
- Telemedicine, remote monitoring and virtual care;
- Biomed / identification systems;
- Digital rostering;
- Control centres;
- Smart beds;
- Real time location systems.

² *The Role of the Physical Environment in the Hospital of the 21st Century: A Once-in-a-Lifetime Opportunity*, Roger Ulrich, 2004



3.1.6 Developments in Design and Construction

The Irish Government *National Risk Assessment*³ identified several risk areas including construction inflation, labour shortages, supply chain constraints and challenges with capacity, all of which will have an impact on the future implementation of strategic capital investment and development.

The adoption of digital technologies and efficiency processes and the wider application of manufacturing processes such as modern methods of construction (MMC), will all form part of the solution when addressing the known challenges and capacity shortages of the construction sector.

There appears to be a very clear trajectory for the construction sector in the immediate future. Significant investment globally in MMC is expected to deliver seismic changes in the sector and it is on this basis, that the Strategy seeks to be agile and flexible to respond to these challenges and arising opportunities.

There is also a significant movement underway internationally, towards the circular construction economy (CCE). This is a shift away from the linear approach of extracting materials, using them to construct and then discarding them at the end of their life (a take, make, dispose model). Instead, the focus will be on raw material reduction, retention and reuse, which aims to keep the materials in a closed loop to retain maximum value and minimise carbon emissions.

There are synergies between CCE and MMC, since there is potential for disassembly and re-use (or disassembly, refurbish, upgrade and re-use). A more standardised approach to design from the outset will be essential to facilitate this.

To address current and future challenges, assist in realising net carbon zero targets and the benefits of time and cost certainty, the HSE proposes to adopt MMC and CCE approaches, alongside digital innovation, when developing and investing in the future healthcare estate.

3.1.7 Climate Action and Sustainability

The Government has published its *Climate Action Plan* and the *Climate Action and Low Carbon Development (Amendment) Bill*, which was signed into law on 23 July 2021. There are also new key energy / greenhouse gas (GHG) related targets for public sector organisations:

For 2030:

- A 50% improvement in energy efficiency.
- A 51% reduction in energy related GHGs.
- All public buildings must have a building energy rating (BER) of B.

For 2050:

- Achieve a net zero carbon emissions target.

The achievement of these targets will require a radically different approach to the development of the HSE estate as part of a wider organisational response to the climate emergency. This will be reflected in the HSE's 'Climate Action and Sustainability' strategy, currently under development.

3.1.8 Workforce

Having a workforce with the right skills, experience and capacity to support the HSE's objectives remains a key enabler for change. A key objective of this Strategy will be to determine the workforce capability and capacity required to meet service needs and deliver the Strategy objectives.

³ National Risk Assessment, 2021/2022 - Overview of Strategic Risks, Government of Ireland, Jan 2011

As activity increases, requirements change and new approaches and processes are implemented, the successful delivery of this Strategy will be dependent on having a Capital and Estates team with the right skills and experience available, both nationally and at a regional level. Having a positive team culture, opportunities for learning and development and an exciting vision for the Capital and Estates team will support efforts to attract and retain the best talent.

3.1.9 Finance

Funding and the levels of allocation or commitment is a significant enabler and driver for change. It impacts the ability to address full property replacement, strategic developments, infrastructural risk through minor capital investment, repairs and maintenance.

The National Development Plan 2021-2030 outlines capital ceilings to 2025 which increase year on year, however it does not indicate an overall capital funding envelope for health over the ten-year period. This presents challenges for financial planning over the medium to longer term which this Strategy sets out to achieve.

The Strategy's implementation phase will seek to understand the most efficient and effective way of funding minor, major and strategic capital through a consistent means of prioritising the investment. Identifying projects that meet the criteria set out in the SAF and make the largest impact for the population and people accessing healthcare services is a priority.

One of three papers in the 2021 "*Healthcare Capital Investment in Ireland series*" called out a recommendation that the link between the level of capital investment in healthcare, and the balance between the current and capital expenditure, should be re-examined. This will seek to ensure that that there are adequate levels of maintenance funding, critical for sustainable health service delivery.

From engagement with the National Treasury Management Agency and National Development Finance Agency it is clear that, outside of Public Private Partnerships (PPP), the State or the European Investment Bank (EIB) are the most appropriate sources of long-term finance to support the Strategy's implementation. This is already the source for the annual health sector capital allocation, the vast bulk of which is directly borrowed by the State with two programme elements funded via PPP. It is unlikely that the EIB would be justified as a funding option, given funds are marginally more expensive than direct State borrowing. Hence, the State will likely be the primary source of capital funding with consideration given to use of PPP as appropriate. There is also a potential for Energy Supply Contracts to provide a source of funding and this will be further explored in the HSE Infrastructure Decarbonisation Strategy.

A further element of this Strategy's implementation will be to scenario plan and model the best approach to funding capital development, investment and ongoing maintenance. The objective of the scenario planning and modelling will be to examine if taking a programmatic approach to refresh the healthcare estate will deliver significant efficiencies compared with historical methods of 'bottom-up' design, construction and asset management or maintenance. As referenced above, the refresh of the estate is also now a requirement for the Irish Government's commitment to fulfil obligations on net zero carbon, recognising that healthcare represents a significant part of the government owned or influenced estate. The net zero carbon objective cannot be achieved by continuing with the current approach to project delivery and ongoing maintenance of the estate.

3.2 Desired 2050 end-state

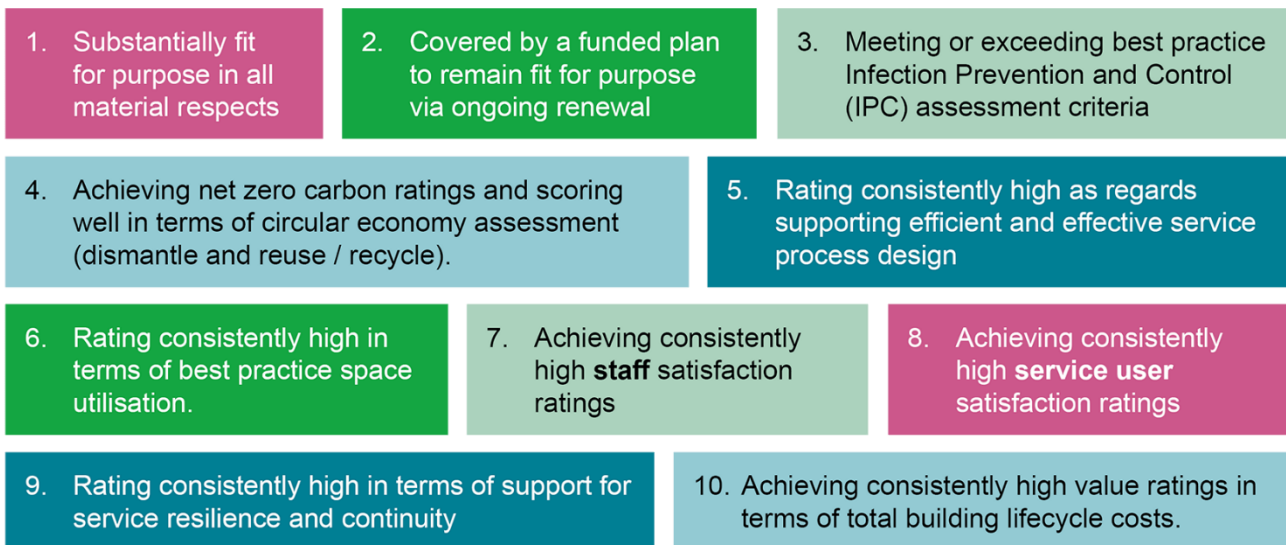
The ambition is to enable a financially and environmentally sustainable, fit-for-future estate provision, where buildings and assets are in the right place, in the right condition, of the right type and able to respond to future service and population needs and other identified drivers for change.



Continuing with the current traditional approaches to estate planning and delivery will likely result in the HSE never achieving its estate objectives. This is supported by the findings of the DoH/IGEES Capital Spending Review papers that the current approach to capital expenditure by the HSE and the associated costs render these objectives unaffordable, unachievable and unsustainable. As custodians of public sector land and buildings, it is important that future strategic development and management of the healthcare estate is considered carefully, to leave a positive legacy for future generations.

The desired end state is set out in Figure 4 below, indicating that no later than 2050, the entire health estate, whether owned by HSE or larger voluntaries, will be:

Figure 4: 2050 desired end state for the healthcare estate



3.3 Key benefits of the desired 2050 end-state

The desired end state was developed by considering the drivers for change and informed by the research and evidence base for change. The table below outlines the **anticipated benefits and impacts** of achieving the desired end-state and delivering both the strategic objective and actions outlined in [Section 4](#).



1. Substantially fit-for-purpose in all material respects

- The delivery of good quality, safe clinical environments;
- Achieving high ratings across the four facets of the condition surveys
- Better capacity, enabling expansion and operability of the healthcare estate critical infrastructure;
- Implementing latest technologies.

2. Covered by a funded plan to remain fit-for-purpose via ongoing renewal

- Is financially viable
- Increasing efficiency and effectiveness of capital spending by scenario planning and modelling.
- Adopting of the Strategic Assessment Framework aligned to the SHIF.
- Rational approach to the prioritisation of healthcare capital investment, which seeks to utilise it to maximum effect given the health needs of Ireland's population.
- Equitable distribution of high-quality capital infrastructure across regions

3. Meeting or exceeding best practice Infection Prevention Control (IPC) assessment criteria

- Improving the patient and visitor experience
- Reduction in the number of acquired healthcare infections
- Providing clinically safe environments
- Helping to reduce the length of stay

4. Achieving net zero carbon ratings and scoring well in terms of circular economy assessment

- Development of an estate that is environmentally sustainable
- Utilises sustainable construction methods, i.e., MMC and CCE
- Reduction in energy and utility costs
- Aligned to the HSE Infrastructure Decarbonisation Strategy and Implementation Plan

5. Supporting efficient and effective service process design

- Working with stakeholders on integrated care models that focus on community care and reduce demand on acute hospital care;
- Human centred services design and development;
- Flexibly designed but standardised facilities;
- Has the ability to sustain change in clinical strategies;
- Enhancements to clinical pathways, supporting models of care transformation and emerging clinical objectives;

6. Rating consistently high in terms of best practice space utilisation

- Implementing real time estate and asset management systems;
- Developing economies of scale with stakeholders;
- Optimisation of the assets, reducing inefficiency and ensuring buildings are well used;

7. Achieving consistently high staff satisfaction ratings

- Improving safe work environments;
- Attracting and retaining skilled staff;
- Enhancing environments to continue to promote health and wellbeing.

8. Achieving consistently high service user satisfaction ratings

- Creating functionally suitable environments that are safe and of good quality;
- Integrated and better-connected healthcare provision
- Embracing the latest advancements in digital patient care
- Creating healing environments through healthy design
- Enhancing organisational reputation and confidence

9. Rating consistently high in terms of support for service resilience and service continuity

- Improved resilience and reduction of risk;
- Enabling easier access to services;
- Facilitating the development of virtual care;
- Strengthening links between primary and community care;
- Maximising available technology;
- Supporting business continuity

10. Achieving consistently high value ratings in terms of total building lifecycle costs

- Sufficient capital and revenue funding in place to maintain the quality and condition of environments;
- To protect and maintain the quality of past investments
- Adoption of the latest innovation in construction and maintenance;
- A more sustainable level of capital investment required;



4 How do we get there?

Section 2.3 describes current estate management processes and challenges. This section sets out the strategic objectives and actions required to respond to these challenges. It concludes with consideration of implementation issues and risks.

4.1 Strategic objectives, actions and change approaches

The high-level strategic objectives and supporting actions and change approaches listed below detail how the HSE intend to deliver on the Strategy, in particular how the Strategy aims to address the challenges associated with how healthcare property is currently managed, maintained and funded, as detailed in Section 2.3. Successful execution of the Strategy will require the implementation of the strategic objectives and change approaches listed below.


Strategic Objective 1: To develop an estate that is net carbon zero no later than 2050

HSE is legally obliged to provide carbon neutral targets set out in the Governments Climate Action Plan. A HSE Infrastructure Decarbonisation Implementation Plan has been developed by Capital and Estates. The Strategy will develop the Plan, in conjunction the Climate Action and Sustainability Unit, to achieve the targets as follows:

- Establish the current performance of the HSE Estate, identifying significant energy users and implementing energy reduction programmes;
- Ensure all new HSE funded estate development are designed to demonstrate a clear roadmap to net carbon zero;
- Develop a deep retrofit energy approach and programme for the existing estate portfolio;
- Develop an approach and programme to achieve ISO energy management standard.

Strategic Objective 2: Deliver a framework for estate investment decisions established by population health-based demand & estate capacity analysis

The SAF will assist in supporting strategic capital investment planning at project initiation stage. The current processes can be described as reactionary rather than strategic, responding to short-term operational needs. The Strategy will build upon the Strategic Assessment Framework (SAF) principles to develop the following:

- Create a structured framework to enable the development of an estate investment programme (updated every five years);
 - Develop national principles for adoption at regional Capital Programme level for demand & activity analysis for healthcare planning;
 - Link estate investment to a population health-based need by care group and by region;
 - Assess need against the drivers for change, clinical models of care, the anticipated workforce and condition of existing estate etc;
 - Create a consistent framework for prioritisation of estate investment and disposal;
 - Develop digital systems to support conducting data driven population analysis.
- 

Strategic Objective 3: Develop National Estates Information System (NEIS) to enable data-driven asset management & progress digital technologies to support informed capital investment decisions

Adopting a data-driven, evidenced-based approach to asset management and development of a Capital and Estates digital strategy will enable informed capital investment and property management decisions. A digital asset management approach will be delivered through implementation of the following:

- Complete the digitisation of current data and continue the condition survey assessments to form an evidence-based and digitised baseline assessment of estate capacity and condition;
- Create real time asset management processes and systems to provide an evidence base for capital investment decisions;
- Standardise asset management processes and NEIS;
- Develop a Capital & Estates digital strategy, supporting C&E digital development requirements (Eg: BIM, Digital Twins, Smart Hospitals etc);
- Develop system capabilities to allow collaborative cross-sector public agency capital investment engagement.

Strategic Objective 4: Optimisation of funding, informed by robust scenario planning and modelling

Scenario planning and modelling will be developed to ensure the most efficient and effective use of funding and funding sources in-line with Public Spending Code requirements, in order to:

- Improve financial control in management, maintaining and investing in the estate;
- Create a consistent steady state pipeline of investment;
- Enable optimal property holding models such as leasehold or freehold;
- Identify an appropriate balance between capital investment and ongoing revenue maintenance;
- Develop digital systems to support financial modelling.

Strategic Objective 5: Adopt innovative approaches to the design, procurement and construction delivery of the estate

Innovative practices will be developed and adopted to provide greater time and cost certainty during the design, procurement and construction phases. The implementation of this strategic objective requires several actions including:

- Adopt a programmatic approach to the management of projects across the estate, using performance data to drive efficiencies and improvements;
- Standardise design, layouts and repeatable room templates at national level with input from leading experts creating straightforward, flexible, adaptable, cost-effective design;
- Engage with the construction industry and key stakeholders to explore potential procurement approaches necessary to deliver capital programmes;
- Create a value-based and more collaborative approach to procurement of services;
- Pilot/pioneer projects to determine the benefits to new and innovative approaches prior to full-scale roll out ;
- Collaborate with other workstreams (1 and 3) to:
 - Achieve digital innovation in healthcare provision, including intelligent (Smart) estate environments, BIM, digital twins digitised asset management systems

- Achieve objectives of net zero carbon and circular construction economy requirements.

Strategic Objective 6: Invest in Capital and Estates Workforce

The Capital and Estates workforce is a key enabler in successfully implementing this Strategy. Determining the workforce requirements to support its implementation will be key to:

- Ensure the right skills and capacity to enable the objectives of this Strategy at corporate and regional levels;
- Develop expertise in areas such as data management, modelling, digital technologies, asset management;
- Promote the Capital & Estates as an employer of choice, attracting and retaining the workforce;
- Create capacity to meet the demands of implementing multiple change programmes and engaging with stakeholders for delivery.

4.2 Principles for implementation

This Strategy proposes a sustained programme of implementation 2022-2050 (with five-yearly reviews). However, there will be a review of the Strategy in the first year to consider the impact of any emerging developments from a strategic context and drivers for change.

A programme of this scale and importance will require robust governance and will benefit from strong Government level support, international expertise, and close working with the Department of Health and the Department of Public Expenditure and Reform.

The key principles for implementation are:



This Strategy will be delivered through further development and implementation of the six key strategic objectives and supporting change approaches and actions. This will be achieved by adopting a national, programmatic approach to its delivery, with implementation plans which are monitored, interdependencies tracked and risks managed and mitigated.

To make real change and transform the healthcare estate, the intention is to adopt the seven principles set out in the HSE Corporate plan, in implementing this Strategy:

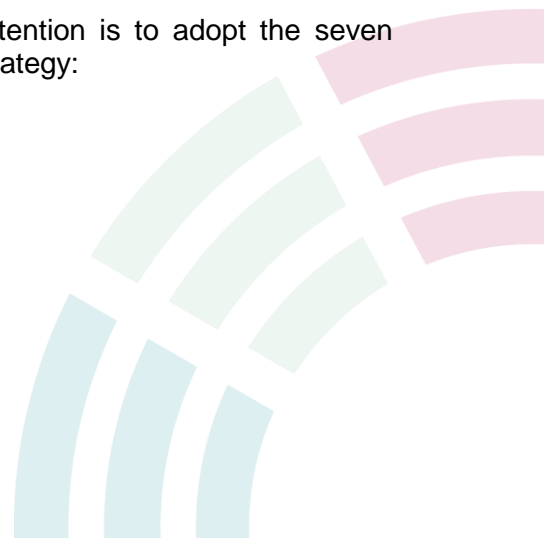


Figure 5: Implementation approach



The HSE will develop stakeholder engagement plans that enable effective collaboration with staff, patients, service users and the public throughout the implementation of this Strategy. This stakeholder participation and feedback will be an important aspect of achieving the objectives of this Strategy. Key metrics will also be developed as part of the implementation plan.

4.3 Risk management approach

Future planning for property and estates within the healthcare sector is a complex task for any organisation and its partners. There are multiple competing priorities and risks (including external risks) which must be managed, both from an operational basis and at a strategic level. Planning will need to be undertaken with minimum disruption to healthcare services in operational environments, while encouraging and enabling clinical and support teams to participate in the transformation, implementation and development of estate improvements.

As with all programmatic estate improvement plans and national programmes, there will be multiple constraints and barriers which may impact delivery. Longer term plans tend to be susceptible to a greater number of external ‘shocks’, such as pandemics, climate change and financial down-turns.

This Strategy will integrate effectively with existing business continuity and risk management processes to increase organisational resilience. The HSE is committed to ensuring that risk management is seen as everyone’s responsibility and is embedded as part of normal day-to-day business, informing the strategic and operational planning and performance cycle of this Strategy implementation.

Risks and challenges to successful implementation of this Strategy include, but are not limited to:

- Availability of sufficient funding;
- Certainty of funding;
- Willingness of all stakeholders to support the new approach;
- External factors such as pandemics, climate change, financial downturn etc.;
- Availability of workforce with necessary skills
- Technology readiness including availability of data;
- Capability and capacity of the supply chain including the Irish construction industry.

4.4 Conclusion and next steps

The development of this Strategy and the direction it describes, is a critical step to achieving the HSE desired property end state. Successful implementation will result in a more **sustainable** healthcare property portfolio, that is **safe and fit-for-purpose**, enabling the delivery of **high-quality healthcare services**, and assisting the HSE achieve its overarching **vision, mission, and values**.

Given the significant number of challenges, competing priorities and potential risk factors, achieving this Strategy is ambitious, against the backdrop of an ongoing deteriorating estate, a back-log of maintenance liability and historical financial constraints, together with ongoing competing pressures on time and resources.

Despite these challenges, the implementation of the Strategy presents a unique opportunity, to **enable strategic transformation** of the estate by adopting proposed change programmes for the on-going maintenance and management, investment, and development of the estate. This transformation will enable the HSE deliver key policies, including Sláintecare and legislative climate action commitments.

Next steps will be delivered through the proposed implementation principles, developing the strategic objectives and adopting the change approaches. This will involve developing a **detailed implementation plan, using a programmatic approach, with a resource plan and funding**.

The ultimate success of the Strategy will depend significantly on having a skilled workforce that is adequately resourced to deliver it. Capital and Estates will continue to work to ensure the appropriate **structures, people, processes and systems** are in place to deliver these Strategic Objectives.

Capital and Estates will also continue to offer leadership, thinking, insights, research, and implementation support in planning, designing, and commissioning health infrastructure in support of this Strategy. It will adopt evidence-based approaches, such as modern methods of construction, intelligent hospitals, standardisation and digital enablement to deliver additional efficiencies for the HSE.

In partnership with all stakeholders, this Strategy will play a key role in improving the experience and outcomes for patients, staff, families and carers accessing healthcare facilities in Ireland.

This is a once in a generation opportunity to address the challenges of the current approaches to developing and managing the property and estate. It will seek to ensure the healthcare estate is fit for purpose supporting Sláintecare's ambitious transformation of the health service.



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