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The Economic Value of Investing in Architecture and Design

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INTRODUCTION

“Good design is not just about the aesthetic improvement of our environment, it is as much about improved quality of life, equality of opportunity and economic growth” -Sir Stuart Lipton, 2002

Good design is a difficult topic to discuss in the context of economics and business investment decision-making. However, it is accepted that the design of our physical surroundings and environment has an enormous impact on the way we live and work. The recent development in the United Kingdom of an intellectual framework has made it possible to identify the attributes that constitute good design as well as the related costs and benefits that accrue from investment in design. For the first time, using a newly developed assessment tool, everyone involved in the design, production and use of a building can easily evaluate and benchmark the quality of its design. Aesthetics and style are just one attribute of many for consideration; good design must also be judged in the broader sense in terms of functionality, build quality and impact.

With an established method of evaluating and discussing design standards it is possible to examine the value of good design from the perspective of a financial investment decision. Benefits derived from investment in design can then be isolated and factored into financial models to justify the deployment of increased resources and capital. Finally, evidence from various sources and building typologies demonstrates the value of investing in good design as well as the growing market demand for well-designed products.

WHY DO ARCHITECTURE AND DESIGN MATTER?

Over the past 30 years there has been an acknowledged lack of investment in the design and planning of our built environment. As a result, low quality building has become the accepted market standard for most public and private projects. However, every hour of every day people are somehow affected by the disappointing, inefficient and uninspiring surroundings we have allowed to be created. Hence, if only a marginal improvement can be made in the architecture and design of buildings and urban spaces, everyone can be better off.

An overwhelming 81% of people in a recent MORI poll stated they are ‘interested in how the built environment looks and feels’, with over a third stating they are ‘very interested’ and another third wanting more of a say in the design of buildings and spaces. 85% of people agreed with the statement ‘better quality buildings and public spaces improve the quality of people’s lives and thought the quality of the built environment made a difference in the way they felt. Other figures from the survey indicate that the majority of people deem well-designed buildings and spaces as positive influences on the quality of daily life, professional productivity, educational attainment, physical well-being, levels of crime and house values. (CABE value of good design, 2002)

History shows that poor design results in high costs and low value of money. By gaining a better understanding of the economic, social and environmental benefits of architecture and design, the case can be made to unlock potential value, increase economic activity and improve productivity. In short, investing in high quality architecture and design can improve the welfare of business and society.

WHAT IS GOOD DESIGN?

Definitions pertaining to quality of design of the built environment are hard to come by. To begin with, good design is about much more than simply appearances and the way things look. Good design is

derived from a complex and creative process encompassing a broad range of activities, elements and attributes. Therefore the perception is that good design cannot be reduced to a simple set of codes and practices, nor can it be easily measured or assessed in a means suitable for communication across the wide range of disciplines and stakeholders involved in a typical project. Moreover, it seems that where established guidelines do appear to exist, such as in classical architecture, often the best examples break or transcend the rules (CABE Design Review). So how does one recognize and define good design?

Fortunately, two organizations in the United Kingdom, the Construction Industry Council (CIC), and the Commission for Architecture and the Built Environment (CABE), have been building an intellectual framework to determine the key attributes that constitute good design with respect to both individual buildings and urban spaces. Both groups have published guidelines identifying the criteria of buildings and places that determine good design and developed methodologies for objective evaluation and assessment. In addition, the architect Norman Foster uses some compelling design principles worth examining as a means of improving the production of well-designed buildings.

Construction Industry Council

The CIC's intellectual framework includes an assessment tool derived from the ancient themes of Vitruvius, the Roman author from the 1st century BC. His *Ten Books on Architecture* is the earliest surviving theoretical treatise on building in Western culture and lays out the need for a scientific understanding of materials. Vitruvius identified three generic attributes that enhance the quality of buildings – translated into English they are 'firmness, commodity and delight'. (Groak 1992, p68)

Based on this and further analysis, the CIC has developed the Design Quality Indicator (DQI), a method of assessing the quality of buildings based on three fields: functionality, build quality and impact. "Build quality" relates to the engineering performance of a building, which includes structural stability and the integration and robustness of systems, finishes and fittings; "functionality" is concerned with the arrangement, quality and inter-relationships of space, and the way in which the building is designed to be useful; while "impact" refers to the building's ability to create a sense of place and have a positive effect on the local community and environment - it also encompasses the wider effect the design may have on the arts of building and architecture. However, it is the duality and interplay of each of these attributes that together constitute a truly high quality building. The overlapping nature is demonstrated in Figure 1.

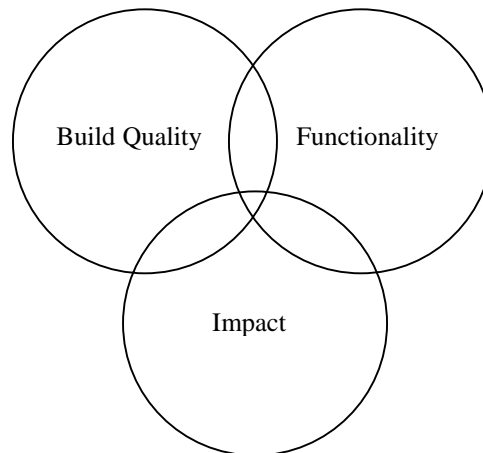


Figure 1 The overlapping nature of design quality (Source: CIC, 2002, p7)

The DQI assessment is groundbreaking in that it is designed for easy use by everyone involved in the production of a building, including commissioners, financiers, clients, designers, developers, contractors, project managers, facilities managers, occupants and users. It is also applicable throughout the entire construction process, from inception, design, and construction, through the point of completion when the building is ultimately occupied and in use. Through the use of a short questionnaire, respondents are asked to score various attributes relating to the design quality of a building on a scale of 1 to 5. Each attribute falls under one of the three primary fields of quality as shown in Table A.

Functionality	Build Quality	Impact
<ul style="list-style-type: none"> ▪ Use ▪ Access ▪ Space 	<ul style="list-style-type: none"> ▪ Performance ▪ Engineering ▪ Construction 	<ul style="list-style-type: none"> ▪ Character and innovation ▪ Form and materials ▪ Internal environment ▪ Urban and social integration

Table A Design quality indicators and attributes (Source: CIC, 2002, p8)

Some examples of statements in the DQI questionnaire include: “The building easily accommodates the users’ needs”; “The lighting is versatile for different user requirements”; “The building provides good security”; “The circulation spaces and common areas are enjoyable”; “The building is sited well in relation to its context”; “There is sufficient daylight in the building”; “The building is energy efficient”; “The building makes you think”. As can be seen, the questions are simple and straightforward, generally requiring the use of basic common sense.

DQI responses are aggregated and plotted on a series of axis arranged in a star with a scale of 1 (basic) to 5 (excellent) for each attribute as shown in Figure 2. Each of the axes, beginning at the origin, corresponds to a different indicator with points farther from the center having increasingly higher quality rating. A building considered to exemplify good design will form an overall shape approaching a circle along the outer edge of each axis, while a building with shortcomings in the design will be identified by various portions missing from the optimum rounded shape. Three potential visualizations are shown in Figure 3.

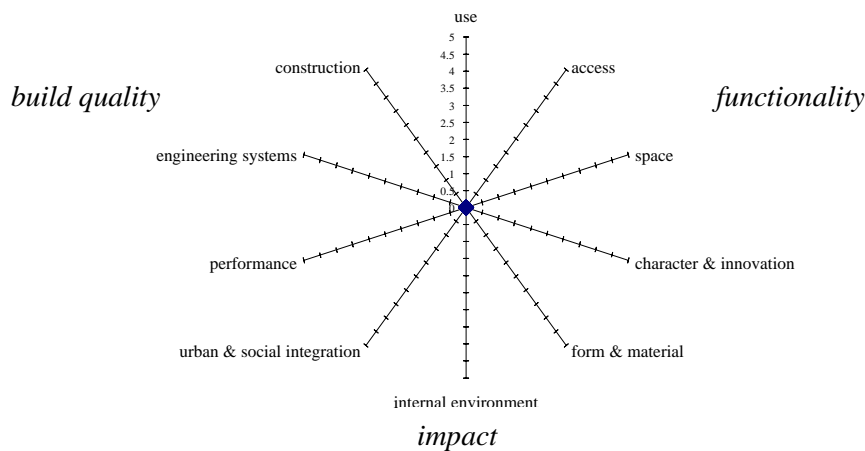


Figure 2 DQI Indicator (Source: CIC Design Quality Indicator: The shape of things to come, Trailblazing Scheme July 2002-June 2003)

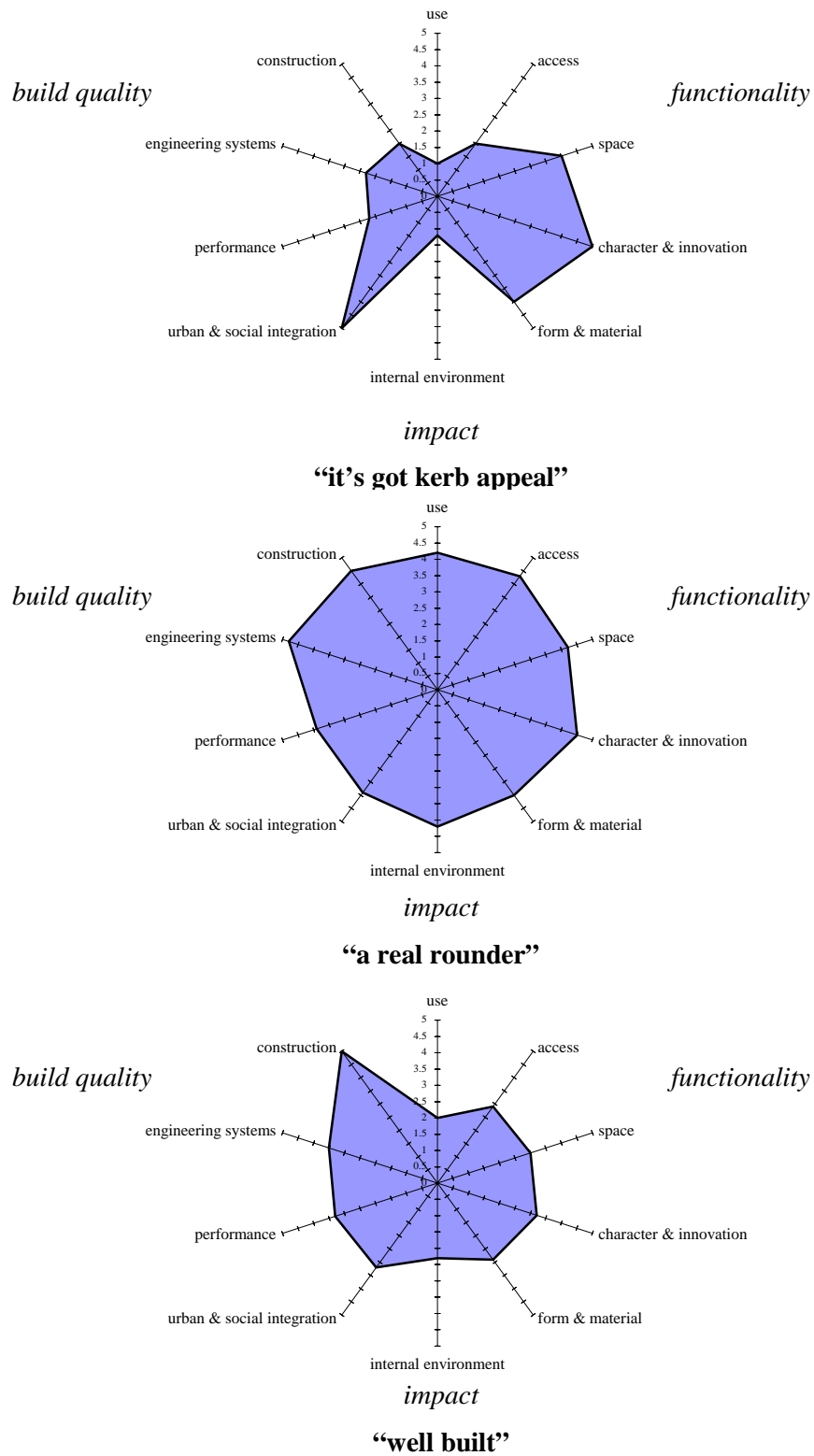


Figure 3 Sample visualizations (Source: CIC Design Quality Indicator: The shape of things to come, Trailblazing Scheme July 2002-June 2003)

The DQI is the only tool of its kind and provides for a quick and objective assessment and evaluation of design quality. The methodology allows for a multitude of useful analysis and performance checks. Using the DQI enables easy comparison of the completed product to the original design requirements. DQI results can also be compared between participants as well as between different projects. Thus, architects can compare their response to that of an engineer, property manager, contractor, planning official, leasing agent, building tenant, etc. Likewise, buildings can be compared and contrasted within peer groups (one hospital might be compared with another), by cost (the design quality of buildings under £5 million could be compared with those over £20 million), by procurement method, etc. (CIC, 2002, p8)

Commission for Architecture and the Built Environment

CABE, the UK's champion for increasing the quality of the built environment, has also developed a substantial intellectual framework used in part for educating various segments of the government in the procurement of new public buildings. The organization also provides a range of services and has issued numerous guidelines and publications that relate to the value of good design. *Better Civic Buildings and Spaces* and *Design Review* are two useful publications from CABE that address the definition of good design of both individual buildings and urban spaces.

Better Civic Buildings and Spaces provides advice for how local authorities can manage their responsibilities and improve design quality standards. The publication offers a range of policies that should be considered in determining the characteristics of well-designed buildings and places. What makes this document useful is that it is geared towards an audience assumed to have minimal knowledge and experience in procuring and managing design. The characteristics are therefore deliberately simple and straightforward and meant to provide guidance towards choosing optimal design proposals. However, the document stresses the fact that many design proposals might satisfy a project's requirements; the point is not to find the perfect solution, but one that fits the suggested characteristics of good design.

According to CABE, the characteristics of a well-designed building should meet five criteria: appearance, context, buildability, context, maintenance and operation. "Appearance" means the building should be excellent in itself and appropriate to its surroundings, attracting a favorable response from users, customers and the wider public; "context" implies the project is seen as a place, not an isolated building, including creation of public space, contribution to the neighborhood and its environment, effect on transport patterns; "buildability" includes ease of construction, materials from sustainable sources, prefabrication, use of standard components; "maintenance" includes energy use, cleaning, repair costs, all estimated over the life of the building; while "operation" includes use of space, navigation around the building, comfort of users, flexibility, effectiveness of the service, and accessibility. (CABE, 2002c)

According to CABE, the characteristics of well-designed place should meet seven criteria: character, continuity and enclosure, quality of the public realm, ease of movement, legibility, adaptability, and diversity. "Character" should be promoted in townscape and landscape by responding to and reinforcing locally distinctive patterns of development and culture; "continuity and enclosure" should be promoted through the continuity of street frontages and the enclosure of space by development which clearly defines private and public areas; "quality of the public realm" should promote public spaces and routes that are attractive, safe, uncluttered and work effectively for all in society, including disabled and elderly people; "ease of movement" should promote accessibility and local permeability by making places that connect with each other and are easy to move through, putting people before traffic and integrating land uses and transport; "legibility" should be promoted through development that provides recognizable routes, intersections and landmarks to help people find their way around; "adaptability" should be

promoted through development that can respond to changing social, technological and economic conditions; and “diversity” should include choice and be promoted through a mix of compatible developments and uses that work together to create viable places that respond to local needs. (CABE, 2002c)

CABE’s objectives have been developed from extensive research and debate and have a unique legitimacy, as they are now included in official UK government guidance protocols. They are useful in defining good design in terms the general public can understand and suggest clear, objective attributes against which quality in design can be assessed.

The *Design Review* publication describes the principles behind one of CABE’s advisory services. It is also based on the three principal qualities of well-designed buildings suggested by Vitruvius (commodity, firmness and delight) and evaluates design quality by examining the series of attributes listed in Table B.

Qualities of Well Designed Buildings	
▪ Order	▪ Conformity and contrast
▪ Clarity of organization, from site planning to building planning	▪ Orientation, prospect and aspect
▪ Expression and representation	▪ Detailing and materials
▪ Appropriateness of architectural ambition	▪ Structure, environmental services and energy use
▪ Integrity and honesty	▪ Flexibility and adaptability
▪ Architectural language	▪ Sustainability
	▪ Beauty

Table B Attributes that make a good project (Source: CABE, 2002b)

Detailed explanations for each attribute can be found in Exhibit A: “What Makes a Good Project” and Exhibit B: “The Project in the Round”. In addition, Exhibit C: “Some Alarm Bells” summarizes some recurring sources of problems having a negative impact on design quality.

Foster & Partners: Good Design in Practice

The UK-based architect Norman Foster’s method of producing a building follows some well-known principles of industrial design, whereby the design process fuses together aesthetics, function and technology. This minimizes the risk of designing a building that is wrapped in a style unrelated to its use or function. Although a full-scale prototype of a building cannot be built and tested like an industrial product such as a car or a PDA, aesthetics can still be justified in terms of function. The value of architecture and design, like an industrial product, can therefore be measured in terms of its utility instead of its beauty.

Problem solving, innovation and intensive user input are at the heart of Foster’s design methodology. According to Foster ‘The designer’s task could be summed up as analyzing set problems in the widest sense and organizing the best available resources to achieve the highest-performance solution in the most economical manner.’ Foster’s ‘economy of means’ focuses on solving the greatest number of problems using the most minimal means. The architect strives to achieve further savings for clients through innovation and the rejection of consumerism, rather than through the traditional methods of achieving savings by lowering the quality of finishes or reducing the size of the building. Innovation begins by ‘learning more about the client needs than the client knows himself’ as well as paying particular attention to a building’s end-user needs and not just the client’s needs. The rejection of consumerism leads to innovation through questioning of suppliers about how products are manufactured and working with manufacturers to enhance performance. The result is good design with savings for the client in the form of lower construction and operating costs and long-term flexibility and performance.

While Foster & Partners might have a reputation for producing high-cost projects, it is important to recognize the relevance of the firm's design methodology, incorporating problem solving, an emphasis on user needs, clarity, functionality and innovation. The idea of 'doing more with less' goes a long way towards achieving a product that is aesthetically pleasing, functional, and economically viable. (Fisher, 1994)

Having reviewed the intellectual frameworks of CIC and CABE and the practice of Foster & Partners, good design can clearly be understood to be about much more than aesthetics and appearances. Furthermore, successful production of good design requires more than just a good architect. Good design requires the collaboration of a team of architects, engineers, clients, consultants, planners and investors to solve problems. Through the practice of an established set of objective principles, good design can produce buildings and spaces that work well for users as well as the surrounding community. Certainly some aspects of design assessment do involve individual tastes and personal preferences, however, it is not often that these aspects are the deciding factor in whether a project is ultimately judged to be well-designed. Overall, it is the quality of the design that matters, not the style.

WHAT IS MEANT BY VALUE?

Having a standardized means of assessing and communicating design quality with a tool such as the DQI is a big step, however, the DQI assessment says nothing about the value of good design with respect to the various stakeholders involved in a project. Arguably, the most important stakeholder is the client or investor, who makes possible the initial creation of a building by having the ability to secure the necessary resources and capital.

Value as it relates to design can be categorized into five general types: commodity, operational, aesthetic, and social and environmental. A well-designed building will incorporate as many forms of value into a whole, generating increased market value for the investor.

“Commodity value”, or “exchange value” is the value that can be priced and realized in the market. It is a common form of value added by product design, packaging design, etc., where the excellence and appeal of the design are two aspects of value acknowledged in higher market share and/or market returns.

“Operational value” is value enhancement relative to business operations and the criteria which define their viability, such as design enhancing quality of life and/or increasing productivity, removing risk, hassle and sources of dissatisfaction, housing new enterprises or processes, reducing operating and lifecycle costs, helping to grasp business opportunity, etc.

“Aesthetic value” is an appreciative value such as the perception of poetic qualities or a cultural and heritage content, or the perceived resolution and harmonization of what is experienced. It also includes esteem value. Like operational value, aesthetic value can be transformed into commodity value, but it can also be perceived as a negative when it constrains other values, such as the added costs of dealing with historic preservation laws. (Allinson 1997, p12-13)

“Social and environmental value” is value that accrues to the public at large. Social value is characterized by benefits accruing to broader public objectives such as better quality of life, increased cultural vitality and greater civic pride. Other examples include accessibility to facilities, more inclusive public space, better security, less stress and reduced travel costs. Environmental value is characterized by benefits such as reduced energy consumption, reduced resource and land consumption, less pollution and improved ecological diversity and sustainability (CABE, 2001a, p26)

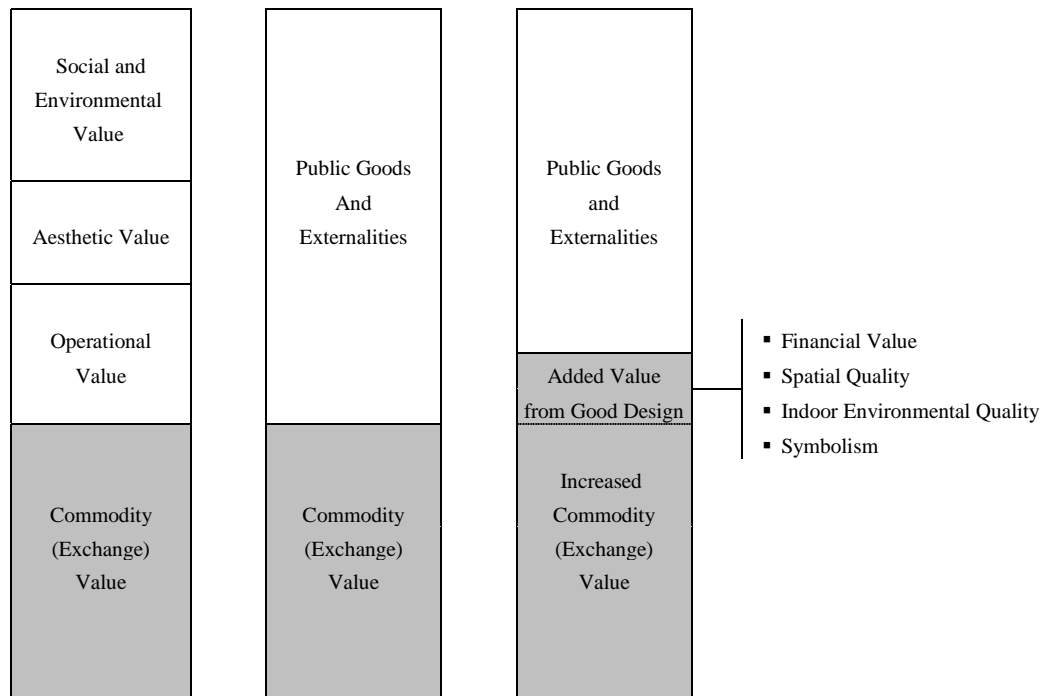


Figure 4 Types of Value (Sources: Allinson, 1997, CABE, 2002 and CIC, 2002)

Figure 4 graphically illustrates the five principle types of value. Operational value, aesthetic value, and social and environmental value can be grouped into a category of public goods and externalities, since none of them are readily priced in the market. However, they are no less important and it is through the use of good design that additional value can be captured and internalized from this segment of value, thereby increasing the value realizable in the marketplace. As shown in Figure 4 and explained further below, increased market value can be realized through investment in design with respect to four specific building attributes: financial value, spatial quality, indoor environmental quality and symbolism.

Economic viability is the necessary general requirement for investment in most public and private projects. Hence, economic value derived from commodity value, operational value and aesthetic value is the focus of this discussion. While social and environmental value are also significant, they do not contribute directly to the decisions made by most profit making enterprises, and the tendency has therefore been to marginalize them (CABE Value of Urban Design, 2002, p21).

HOW BUILDINGS AND SPACES CREATE ECONOMIC VALUE

“We shape our buildings, and afterwards our buildings shape us.” -Winston Churchill 1943

Value from the client/investor perspective can be understood by considering the construction of a building as creating two types of value: the market value of the completed building itself (commodity value), and the value that can be added to an organization through certain benefits provided by the building. By using design to create more benefits for businesses and organizations to exploit, the market value of a building can be increased significantly. According to CIC, investment in design relative to the four attributes of financial value, spatial quality, indoor environmental quality, and symbolism can create economic value. The added value potential is summarized in Figure 5.

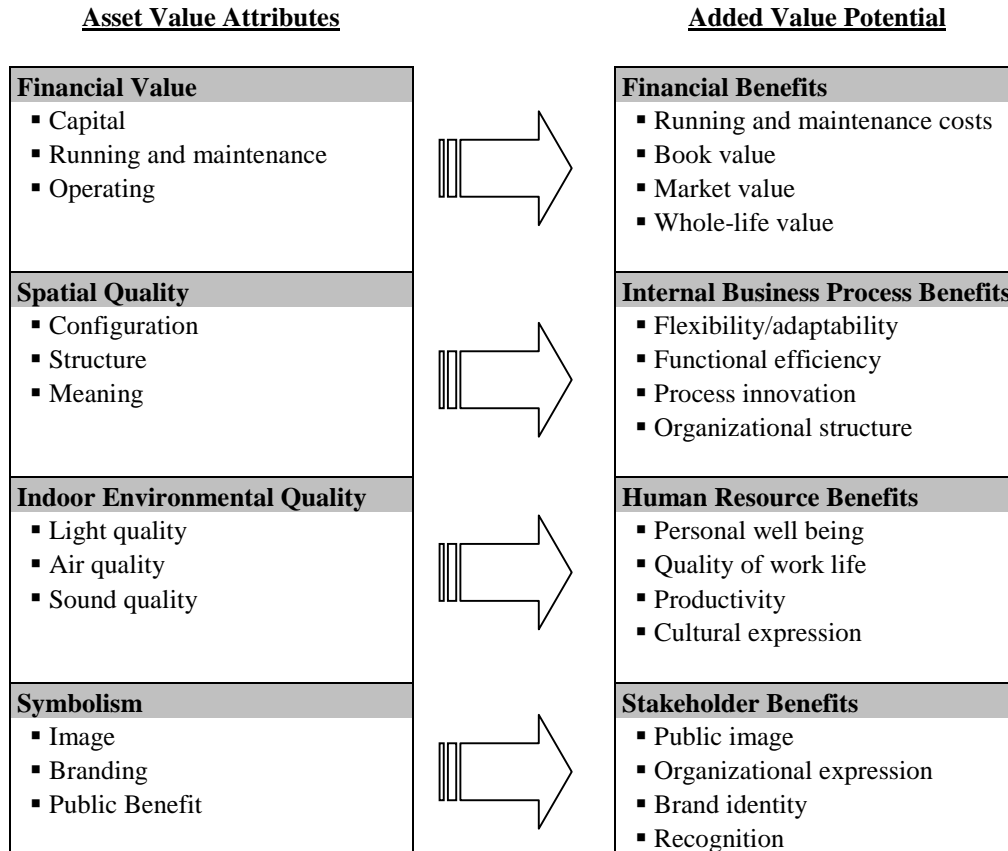


Figure 5 Asset Value Attributes and Added Value Potential (Source: CIC, 2002, p46-47)

Financial Value

The financial value of a building influences the amount of capital and resources available for investment in good design. It also relates to the costs of running and maintaining the building as well as the labor costs involved in operating a business. Owning or occupying a building often involves a large amount of capital, which must be justified in terms of a financial valuation. While a focus on minimizing capital costs is understandable, it can lead to flawed decision making by limiting the amount of resources and capital necessary for investment in value-added design. Design investment can therefore be realized by having an ability to factor the additional return on investment from various added benefits.

An example is to recall that the act of constructing a building creates an economic asset with a base financial value. Further design investment can result in a reduction of running and maintenance costs over the lifetime of the building, which can be passed through to the building's users and factored into a financial analysis. Further design investment can also reduce personnel and staff operating costs by increasing occupant labor productivity. While the running and maintenance costs of a building is approximately 15% of the cost of operating a business, labor represents on average of 85%. Thus, even a small increase in productivity due to better design can have a large absolute impact on reducing overall operating costs, which can result in increased financial value for the investor. Recognizing the additional economic value from investment in good design can therefore increase financial value, allowing more capital and resources to be committed to the design attributes discussed below. Factoring the ability of a building's potential impact on performance and productivity into a financial analysis can ultimately lead to increased market value.

Spatial Quality

The quality of a building's interior space has an impact on the internal business processes of its occupants. Size, shape and configuration of space are known to affect social behavior and performance. Although most businesses are used to trading space as a commodity in the real estate market, most are not able to assess the definition and use of space with respect to business productivity. For example, in a retail project it is known that space designed so as to maximize flow of consumers leads to higher sales; and in an office environment the design of open plan space is known to lead to increased communication and sharing of ideas. Design can therefore increase productivity through the use of interior space planning.

Indoor Environmental Quality

The quality of a building's indoor environment has an impact on its occupant's human resources. Through proper design the indoor environment can be made to meet the specific needs of an organization. Although environmental quality might be presumed difficult to assess, factors such as ventilation, temperature, humidity, smell, lighting and color are each tangible and quantifiable. Other factors identified as important but more qualitative are sense of control (visual privacy, light, sound), social support (comfort, food, social interaction, overnight stay), access to nature and control of other distractions (views, access to outside, social contact, passing of time). Research reviewed by CIC has shown that alleviation of discomfort caused by these factors is a fundamental need for building occupants. Furthermore, surveys indicate that poor heating, ventilating, air conditioning and indoor air quality are the most common reason for office tenants to move out of a space. However, when looking for new space, these issues are not usually raised. Therefore, improved design of the indoor environment can add value by reducing tenant turnover and improving occupant productivity.

Symbolism

The degree of symbolism generated by a building impacts its occupant's relationship with external stakeholders. Considering the building as a physical artifact in its surrounding environment usually results in a focus on visual qualities that are largely subjective, such as scale, harmony and decoration. However, investment in design can be used to generate an image or assist in the branding of an organization or business. Organizations that recognize or utilize the power of brand can use a building's external appearance to protect and enhance brand image. Speculative real estate developers are also known to be interested in the appearance of a building, believing 'wow factor' and 'curb appeal' are functions of good design and key criteria for quickly leasing or selling a building. The building's design also has the ability to further business principles and objectives with the public by addressing society's values through the creation of externalities with public benefit. Recognition of a 'green' building that benefits society may be a benefit for certain businesses and organizations. The design of a building's external appearance can therefore generate varying degrees of symbolism that can provide added market value.

WHAT ARE THE ECONOMIC COSTS AND BENEFITS OF GOOD DESIGN?

When a building has been constructed where the cost exceeds the building's market value a conscious investment has been made in certain benefits. However, even though they are not priced in the market, these economic benefits still accrue to the investor in some form of business benefit as discussed above. The main reason these benefits are not priced in the market is due to the inability of financial valuation techniques, such as discounted cash flow analysis, to incorporate the benefits acting as a source of

additional value. Since some of these benefits cannot easily be expressed in financial terms, market prices can be a poor indicator of the real cost of investment and the expected future benefits.

The ability to capture the tangible and intangible benefits relative to cost and convert them into market value can be achieved by understanding the financial, human resource, business process, and symbolic benefits introduced. Recognizing the importance of design as a value added investment can help translate these business benefits into monetary value in the marketplace. For benefits to be captured by the investor they must be taken into account in the financial income and expense analysis.

An Value-Added Approach

The economic costs and benefits of good design can be understood in the context of a value-added investment model developed by CIC and shown in Figure 6. The curve of capital investment begins at the point of zero investment in design, whereby the building produced would be completely dysfunctional, reducing productivity of occupiers and users. Point A indicates investment equal to the minimum functional requirements of an organization's needs, but provides no additional business benefits that could increase productivity or enhance market value. Point C shows the point of diminishing marginal returns, where excess resources invested in design no longer produce additional value added return. All points between A and C indicate a value-added business benefit derived from capital and resources invested in the four design attributes identified by CIC.

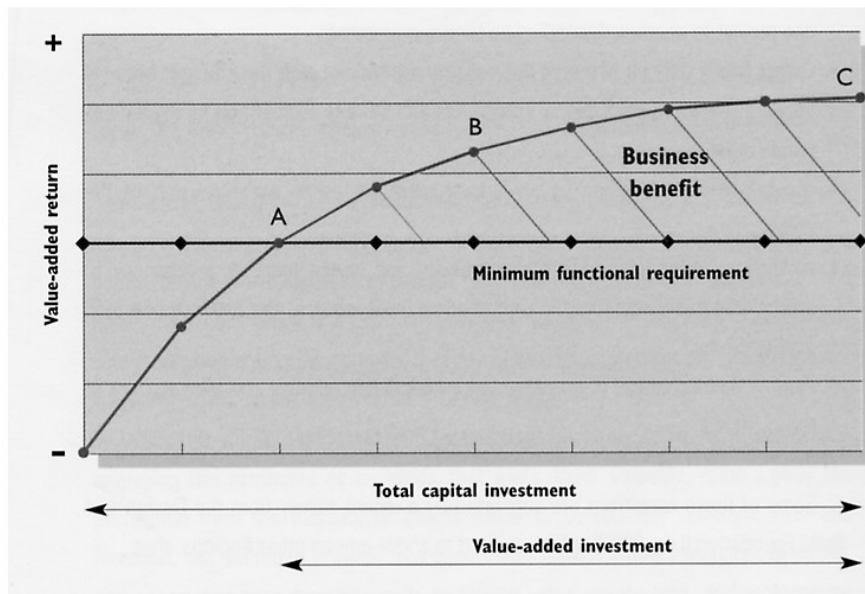


Figure 6 Defining value-added investment (Source: CIC, 2002a)

The diagram shows that capital investment in design can produce value added return on investment. The value added benefits from investment in quality design can lead to measurable benefits to various users and stakeholders of a project. A summary of quantitative benefits include higher rental rates, increased market value, higher long-term market value, increased sales, and increased attendees; reduced running and maintenance costs; reduced absenteeism, occupant stress and complaints; and increased productivity, quality and quantity of work, staff retention and visitor satisfaction. Qualitative benefits include image enhancement and better marketplace attractiveness. Investment in design of both the internal and external attributes of a building can add value that can be captured by various stakeholders, ultimately increasing the market value of the building itself.

Summary of Economic Costs and Benefits

Investment in design can add value in terms of the form of direct benefits to those responsible for the investment as well as indirect benefits to society and others. Some forms of value are tangible and can be measured objectively, while other forms are intangible and cannot be determined using simple valuation techniques. A list of further potential economic costs and benefits pertaining to urban design are shown in Table C. An expanded table including social and environmental values can be found in Exhibit D: “The Potential Value of Good Design” and Exhibit E: “The Potential Costs of Good Design”.

Tangible Economic Benefits	Intangible Economic Benefits
<ul style="list-style-type: none"> ▪ Potential for higher land values ▪ Higher sale values ▪ Increased funding potential (public and private) ▪ Higher rental returns ▪ Increased asset value (on which to borrow) ▪ Reduced running costs ▪ Maintenance of value/income ▪ Reduces maintenance costs (over life) ▪ Better re-sale values ▪ Easy maintenance if high quality materials ▪ Reduced security expenditure ▪ Reduced running costs (energy usage) ▪ Reduced public expenditure (on health care/crime prevention/urban management and maintenance) ▪ Increased economic viability for neighboring uses/opportunities ▪ Increased local tax revenue ▪ Reduces travel costs 	<ul style="list-style-type: none"> ▪ Potential for greater security of investment depending on market ▪ Quicker permissions (reduced cost, less uncertainty) ▪ Distinctiveness (greater product differentiation) ▪ Allows difficult sites to be tackled ▪ Better developer reputation (increased confidence/'trademark' value) ▪ Future collaborations more likely ▪ Enhanced design professional reputation ▪ Increased workload and repeat commissions from high quality, stable clients ▪ Competitive investment edge ▪ Higher quality long term tenants ▪ Happier workforce (better recruiting and retention) ▪ Better productivity ▪ Increased business (client) confidence ▪ Fewer disruptive moves ▪ Increased occupier prestige ▪ Increased city marketing potential
Tangible Economic Costs	Intangible Economic Costs
<ul style="list-style-type: none"> ▪ Potential for reduced land values ▪ Higher risk if increased development costs ▪ Higher infrastructure costs (public space and social infrastructure) ▪ Higher construction costs ▪ Higher design costs (professional fees) ▪ Greater capital investment ▪ Continued private sector responsibility for public/private spaces ▪ Higher rents ▪ Higher management fees 	<ul style="list-style-type: none"> ▪ Increased design time (not always recognized in fees) ▪ More complex management if mixed use development

Table C The Potential Economic Value of Good Urban Design (Source: CABE The Value of Urban Design)

Whereas the table above pertains to urban design and space, the value of investment in design with respect to individual buildings relate to most of the cost and benefits as whole.

Who benefits?

The potential benefits can be realized across various project stakeholders. Investors benefit through favorable returns on their investments and through satisfying occupier demand, although the full payoff may not be immediate. Developers benefit by attracting investors and pre-lets more easily and hence from enhances company image; if they retain a stake in their developments long enough, they also benefit from good returns on their investments. Designers benefit since good urban design is crucially dependent on their input. Occupiers benefit from better performance, loyalty, health and satisfaction of their employees and from the increased prestige that well designed developments command with guests and clients. Everyday users and society as a whole benefit from the economic advantages of successful regeneration, including new and retained jobs, and also through access to a better quality environment and an enhanced range of amenities and facilities. Finally, public authorities benefit by meeting their obligation to deliver a well designed, economically and socially viable environment and often by ripple effects to adjoining areas. (CABE, 2002a)

A Note on Design Procurement and Management

Time, money and energy spent during the early stages of initial planning and design of a project can have a substantial positive benefit to the potential amount of value added. In many ways, the service of providing design is an important source of value creation itself, for the successful procurement of design produces deliverables that allow for the creation of value. As shown in Figure 7, however, if design is not procured and managed properly, even a well-designed building can result in an asset that is financially unstable and poorly constructed.



Figure 7 Service and Value (Source: Allison, p13)

WHERE IS THE EVIDENCE?

A summary of research studies from around the world shows that good design adds value in the areas healthcare, education, housing, civic pride and cultural activity, business and crime prevention. A well designed hospital helps patients recover faster; a well designed school improves the academic

performance of students; a well designed department store has a direct positive impact on sales; and a well designed neighborhood results in lower crime and higher housing values. (CABE, value of good design, 2000)

Evidence of investment in quality design and ensuing benefits in a variety of building types and property sectors has been shown to exist and highlighted by numerous sources including trade publications, the popular press, academic research and professional experts. Furthermore, evidence of a growing market of design-conscious consumers is affecting the design and production of buildings and spaces today in a surprisingly powerful way. Some noteworthy examples are summarized below.

Design Award Contests

Architectural Record, the monthly trade publication for the American Institute of Architects (AIA), in conjunction with Business Week feature an annual “Good Design is Good Business Award” contest honoring projects of various building types that demonstrate where investment in quality design has led to a measurable increase in the bottom line. The 2002 award winners included: (i) a new University of Pennsylvania facilities building which resulted in increased morale and improved communication as well as greater ease in recruiting and retaining personnel; (ii) a Midwestern office-furniture manufacturing company’s new production facility has increased dealer and end-user visits from 15 in the prior year to 364, grown corporate accounts from 3 to 15 percent of business, and cut delivery time from 24 to 16 months; (iii) a new Toys “R” Us store in Times Square, Manhattan which has become a premier destination with media coverage, visitors to the store and revenue from advertising all exceeding expectations; (iv) a new automotive equipment factory in Mexico designed and built in 10 months for \$66 per square foot allowing the company to consolidate its operations, find innovative methods of increasing production and reducing costs, as well as achieve a 1% employee turnover rate – now considered a benchmark for Mexico; and (v) a new Texas hospital clinic where overall exam-room utilization increased from 41 to 60 percent, the percentage of patients completing check-in/out in less than 15 minutes increased from 69 to 94 percent, and annual growth exceeding 9 percent in the first six months after opening. These five award winners highlight the range of business benefits that have been exploited due to conscious investments in quality design. (Architectural Record, 2002)

In October 2000 Tony Blair launched the “Prime Minister’s Better Public Building Award” to encourage adoption of quality design principles in all new public sector buildings in the UK, regardless of size and cost. The award intends to change the perception that good design is costly luxury, and honors excellence achieved both in design quality and procurement practices. It is awarded annually to a new building project of any size, commissioned by or on behalf of central or local government or by a grand-aided organization. The criteria for the award include first-class in terms of design, construction, financial management, procurement method, and social and environmental value. The winner of the first award was the Tate Modern project in London’s south bank. Although only 2 million visitors were projected for the opening year, over 5 million came. The increase in economic activity in the area has far exceeded initial expectations. (CABE, 2001d)

Office Sector

One of the most often cited studies on the economics of architecture, carried out in Chicago in the early 1980’s measured the impact of ‘good’ architecture on rental rates in commercial office buildings. The study found that buildings that had received architectural awards commanded rental premiums as high as 23% relative to the market for comparable buildings (Hough and Kratz, 1983). Another study in the late 1980’s found a positive relationship between design quality and market rents (Vandell and Lane, 1990).

Canary Wharf Group PLC, the company that owns and manages the east London development, allows companies looking for a new building to choose from a range of designs by some of the biggest names in world architecture: SOM, Kohn Pedersen Fox, Foster & Partners, Pei Cobb Freed and Jean Nouvel. The company explicitly uses famous name designers to seduce occupiers into buying an identity with their building. Almost everything at Canary Wharf has been designed by a big name, from footbridges and clocks to sculptural lighting with the belief that the quality of public spaces and infrastructure is as important as the buildings. The company, which competes for tenants on a global scale with other cities like Frankfurt and Paris, claims it is thus able to charge higher rents than it would otherwise. (Building Design, 1999)

A new Paris office project, developed in partnership with Goldman Sach's Whitehall fund, has been designed with an employee-focused atmosphere. The 475,000 square foot facility has been planned to facilitate communication, allowing executives easy movement across the office and incorporating many natural meeting places. The design also includes 43,000 square feet dedicated exclusively to relaxation and socializing at a cafeteria, theme restaurants, an auditorium, and VIP lounges set in a landscaped club building. The project has been designed to meet the current needs of a market segment where quality of life at work is a main concern for top managers. According to a survey of 530 French executives: (i) one in three executives are dissatisfied with their work environment or location, (ii) 80% of executives believe a good office environment has a strong influence on productivity, (iii) 77% of executives view quality of office environment as an indicator of management's respect for employees, and (iv) 85% of executives say the office environment is a major contributing factor to their morale and motivation. (Urban Land Europe, 2003 p15)

Housing Sector

According to *Builder* magazine, savvy home buyers, even in the low-end market, are expecting much higher design quality and no longer base a purchase just on floor plans and square footage. With high-end production housing now competing with the custom home segment, the home building industry is in a position to benefit financially from high-quality design. The magazine contends that the design-conscious market extends from the youngest Gen-Xer to the oldest boomer and predicted five design trends in U.S. housing production in 2002: (i) smaller, more practical spaces with quality over quantity, (ii) emphasis on community, project layout, pedestrian friendliness, and social attitude, (iii) high demand for low-maintenance materials from time-deprived homeowners, (iv) energy efficiency a must with low utility bills and health concerns, and (v) still smarter homes with high-speed internet access and community intranets. (Drueding, 2002)

Urban Splash, a UK-based housing developer formed in 1993, seeks not just visionary ideas, but pragmatic, buildable and marketable homes. The company has been successful at combining quality architecture and sophisticated marketing to sell loft conversions and newly built housing with a belief that good design can command a premium on the market (Building Design, 1999). As of 2002, the company had garnered 14 Royal Institute of British Architects Awards, 7 civic awards, 7 regeneration awards, 11 other architecture and design awards, 7 business awards, 5 marketing awards, and 17 entrepreneurial and personal awards. (Urban Splash, 2002)

The Value of Housing Design and Layout, a report commissioned by CABI, revealed the impact of design on the value of housing projects to developers. The research showed evidence that differences in the design and layout of housing had an impact on a site's commercial value for a developer. Specifically, developers can add value to their operations by adopting new and distinctive design practices that create a strong sense of neighborhood. Also, the use of good design principles can create a sense of place and a new type of location, which can add further value than just the choice of location itself. (CABI, 2003)

In Scotland, more and more people are seeking alternatives to the bland and expensive houses offered by volume developers. Until recently, little architectural innovation had occurred since the 1960s. Rising house prices and low interest rates are reported to have fueled both new development and existing home additions. In addition to an exponentially growing self-build movement, the number of people choosing to hire an architect to design a distinctive home has also grown. Examples across the country show a determination to produce quality housing solutions suited to a diverse regional climate using highly cost-efficient building methods and materials. According to *The Scotsman*, “It is this X factor of good design which distinguishes Scotland’s new private houses from so much of what has gone before. Whether the rigorous application of environmental principles, or the precision of modern materials, the sheer diversity of recent projects by the current generation of architects is striking. Homeowners no longer need fear the unknown – good architecture has become an excellent investment.” The article suggests the growing popularity of television make-over shows has also increased the perception of value added architecture and design to daily domestic life. (Wilson, 2002)

Residential developers in New York, London and Miami are commissioning celebrity designers and architects like Philippe Starck, Richard Meier and David Rockwell to design and brand apartment buildings. In London, the 24 units in the first phase of Mr. Starck’s project were sold out within three weeks. In New York, Mr. Meier’s glass-skinned towers command prices of nearly \$2,000 per square foot, easily two times the market rate. The lead development partner in the Meier project believes ‘people are becoming more attuned to well-designed items’. Another New York developer believes ‘If you’ve got a commodity everyone else has – a brick box – you can only compete by price’, but says, ‘Ours will be so differentiated that I don’t think we’ll have to do that.’ According to the project sales agent units have literally sold themselves due to the quality of the design. (Chen, 2002 and Rich, 2002)

Retail Sector

Given increasing competition in the consumer marketplace, the retail sector is beginning to rely more than ever on architecture and good design. Prada, the Milan-based fashion company, teamed up with internationally known Dutch architect Rem Koolhaas to design its flagship retail store in SoHo, New York. Widely seen as a revolution in retail design, the store combines high tech with high style: online video in the changing room allows customers to view themselves in various colors, styles and accessories; walls of glass carry sunlight deep into the store’s interior; stadium-style bleachers display shoes and double as a stage. New York has more examples, as Frank Gehry has turned the nearby Issey Miyake store into a miniature version of the Guggenheim Bilbao, and the famous French minimalist designer Philippe Starck has given his signature treatment to Jean-Paul Gaultier’s boutique on Madison Avenue (Theil, 2002). With shopping now considered a primary leisure activity and not just a means of fulfilling basic needs, the ability to create a memorable experience through design is becoming more justified.

In Tampa, Florida new retail developments are responding to the fact that Americans are expecting more than bricks and mortar from the places they shop, and desire more of a sense of place. These projects contain the features of a strip shopping center or shopping mall, but are designed as open-air urban areas. Some are modeled on the basis of older neighborhoods, designed for pedestrians and featuring a retail main street. New buildings are not separated from the road by parking lots, allowing for the creation of an urban environment to accommodate walking and eating outside. These new developments, often referred to as “lifestyle centers” have emerged as affluent, educated and well-traveled consumers seek places to shop that reflect themselves and are a backlash against the plain vanilla shopping centers of the past 50 years. The real estate industry is beginning to supply the right product that discerning consumers with precious leisure time now demand. (Simanoff, 2002)

Healthcare Sector

Hospitals are finding that improving layouts and looks can translate into better health for their patients and allow for more productive staff. Tracking patients that had checked into a hospital in Detroit both before and after a redesign, administrators found that on average the patients gave themselves 45% less self-administered pain medication in the refurbished facility. The reduced use of pain medication by another sample of patients reduced the cost to the hospital by 23.5% relative to others who had checked in before the renovation. Studies of other hospital renovations incorporating replacing or updating hospital décor and design were shown to have a positive effect on patient's health as well. In addition, changes in the design at a Chicago hospital included the installation of window seats in all patient rooms that fold out into beds for family members to spend the night. The added comfort and convenience significantly reduced the amount of time night staff spent dealing with family member complaints, leading to improved staff productivity and better patient care. (Rich, 2002)

Convention Centers

A new convention center expansion in San Francisco bucks the trend of conventional design for this property type. Instead of the usual inward-focused huge box, the most functional shape for a convention hall, the city opted to integrate the facility into the streetscape of a walking urban environment. When completed, the building will have a crystal palace look, with a glass lobby the size of a football field floating above the street. Inside, attendees will be able to watch the sun rise over the bay and the skyline; while outside along the streets glass "lanterns" will enclose stairways, articulating the site and making it look less like a big box. Additional revenue is expected to be generated through the use of innovative ideas, such as faster loading docks that translate into more rentable days as well as leases to retail shops beneath a glass canopy along the street. (Nolan, 1998)

Design Guidance

The Value of Urban Design, commissioned by CABI, found good urban design adds economic value in a variety of ways including: (i) producing high returns on investments; (ii) placing developments above local competition at little cost, (iii) helping to deliver more rentable area, (iv) reducing management, maintenance, energy and security costs, (v) contributing to more content and productive workforces; (vi) differentiating places and raising their prestige; (vii) opening up investment opportunities, raising confidence in development opportunities and attracting grant monies; and (viii) reducing the cost to the public purse of rectifying urban design mistakes.

There currently exist a small number of specialty development advisors that have successfully guided clients in the investment of good design in urban context. One example is 100 Wood Street, an office building in central London designed by Foster & Partners, where a design-centric investment by the client resulted in the construction of a high-quality building at the same unit cost as a conventional building generating premium rents in a market where overall rents were falling. Upon completion, the building was oversubscribed by tenants and was considered 'the City's most popular building from a property point of view...with good open floors and an offset core.' Innovative solutions included the design of ultra-thin floor plates resulting in the ability to add an additional floor to the building (Harris, 2003).

CONCLUSION

This paper in part relies heavily on a growing intellectual framework on the value of good design that has recently been developed in the UK and is being disseminated to both the public and private sectors in that country. It is also a compilation of evidence from around the world from

both public and private projects across various industries and building typologies demonstrating that good design is not only good business but is capable of making everyone better off.

With continuing research, increased market education and more leading examples, investment in high quality design in all its forms will hopefully become the market standard for our built environment.

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EXHIBIT A: WHAT MAKES A GOOD PROJECT?

The Roman architect Vitruvius suggested that the principal qualities of well-designed buildings are 'commodity, firmness and delight'.

- Commodity: buildings should work – they should be fit for the purpose for which they are designed
- Firmness: buildings should be soundly built and durable
- Delight: buildings should be good-looking – their design should please the eye and the mind

These three criteria remain as sound a basis for judging architecture now as when they were conceived.

Just as each design decision affects many others, so the three criteria are intertwined within the design process. Many of the aspects of a project which need to be taken into account when evaluating it will touch on all three. These include the following:

Order. 'Order in architecture' wrote Geoffrey Scott in 'The Architecture of Humanism' (1914), '... enables us to interpret what we see with greater readiness; it renders form intelligible by making it coherent; it satisfies the desire of the mind; it humanises architecture.' Order can manifest itself through symmetry (or asymmetry) and balance; through repetition of organisational or structural elements such as the grid, the frame or the bay; and through resonance between elements of different scales.

Clarity of organisation, from site planning to building planning.

If the organisation of the plan and section are clear, then much else about a project will fall into place.

Expression and representation.

A building's appearance can tell us something about what purpose it serves; about its place in the order of the town or city; about what sort of spaces it contains; about how it is organised and put together.

Appropriateness of architectural ambition.

Architecture can be too noisy or too quiet. There are places for fireworks and places for modesty within the built environment – in relation both to a project's context and to its purpose and status.

Integrity and honesty. Is what you see what you get? If so, the plans, sections, elevations and details will all visibly relate to each other and build up to a coherent picture of the design.

Architectural language. The design of building will involve choices about matters such as whether to represent it primarily as a wall or as a frame structure, about patterns of solid and void and light and shade, and so on. In a good design, such choices will seem compelling and inevitable, with a recognisable relationship to the broad conception of the project and its setting; in a poor project such choices will often seem arbitrary.

Conformity and contrast. A good designer will consider the relationship of a design to its context. This is not to imply that one of the aims of a design should necessarily be to 'fit in'; at its worst, this can be little more than an excuse for mediocrity. Difference and variety can be virtues in new proposals as much as sameness and conformity; and of course different contexts themselves may be more, or less, uniform in their nature.

Orientation, prospect and aspect.

A building's orientation should take into account the implications for energy use as well as urban design issues. In relation to prospect and aspect, the design should consider what happens at different times of day and night and at different times of year. The view from the window, and opportunities to see the sky and weather, are as important in buildings such as offices and hospitals as they are in dwellings.

Detailing and materials. The quality of the plans, sections and elevations should be carried through to the level of detail – it is disappointing to see a promising project fail because of a lack of refinement in the detailing. The choice of materials is equally important and relates to an understanding of context as well as to questions of maintenance, durability, sustainability and the way the building can be expected to age.

Structure, environmental services and energy use.

In a building of any complexity, these aspects of the project need to be taken forward as an integral part of the scheme design from the beginning. In a well-designed project, it is likely that the strategies for dealing with these aspects of the design will be apparent from the plans, sections and elevations.

Flexibility and adaptability. The purposes for which a building and the parts of a building will be used are likely to change over its lifetime. The technologies it contains will change as well. A good design will be flexible – able to accommodate changing requirements without major alterations where possible – and adaptable, that is, capable of being altered or extended conveniently when necessary.

Sustainability. Taken in the round, a project should use natural resources responsibly.

Finally, we should not be afraid to ask about a building: is it beautiful? If it is, then the resulting lifting of the spirits will be as valuable a contribution to public well-being as dealing successfully with the functional requirements of the building's programme.

Key questions

- Will the accommodation proposed meet the functional requirements of the brief?
- Is it likely that the building's users – of all kinds – will be satisfied with the design?
- Is the design likely to enhance the efficiency of the operations to be contained in the building?
- Can a stranger or visitor find the entrance and then find their way around the building? Is orientation clear enough not to need signs or maps?
- Are the plans, sections, elevations and details of a building all of a piece, visibly related to each other and to underlying design ideas?
- Does the design demonstrate that thinking about the requirements of building structure and construction and environmental services has been an integral part of the design process? Is there evidence that the different design disciplines are working as a team?
- Will the building be easy to adapt or extend when the requirements of the building's users change? Are the floorplates suitable for other uses in the future?
- Does the design take into account whole-life costs?
- What will the project look like in different conditions: in sun and rain; at night; over the seasons? Will it age gracefully?
- Can one imagine the building becoming a cherished part of its setting?

ARCHITECTURE AND THE HISTORIC ENVIRONMENT

In CABE's view, high standards of design should be demanded everywhere. The standards to be applied to projects set in sensitive historic environments do not, therefore, differ significantly in principle from those applied to projects elsewhere; the need to understand and respond to the context is the same. Nevertheless, designing in the context of a sensitive historic environment does introduce additional challenges. The more sensitive the site, the greater these challenges can be expected to be – and the higher the expectations of everyone involved.

Some historic contexts are capable of assimilating dramatic architectural contrasts, and an unashamedly modern building will often be preferable to a pale imitation of what has gone before. Equally, there are places for ingenious contextual solutions and, on occasions, for thorough and scholarly reproductions of architecture of the past. There

are no prescriptions for success; there is no substitute for wide and deep analysis of the context to inform the design process; nor, most importantly of all, is there any substitute for design skill.

CABE works closely with English Heritage on projects involving the historic environment, and the two bodies take into account each other's views when evaluating projects. The joint CABE / EH publication 'Building in Context', which is based on case studies of a range of recent projects, gives further guidance on the subject of designing new buildings in historic contexts.

Key questions

- Has the design taken into account the challenges set by the nature of the historic context?
- Has it succeeded in rising to these challenges?
- Does the design measure up to the quality of its context?

EXHIBIT B: THE PROJECT IN THE ROUND

Designing buildings is difficult, and no design is perfect. Usually, a number of different design approaches will work in response to a given set of circumstances – the great variety of entries submitted for most architectural competitions provides good evidence for this. Designing buildings is not about finding the perfect answer, but about finding a good answer.

Key questions

- Commodity: does the building work? Does it answer the brief, is it convenient and efficient for all to use, is it accessible?
- Firmness: is the building physically sound? Is it durable and sustainable, does it use materials and energy wisely and responsibly?
- Delight: is the building good-looking? Does the design rise above the contingent to organise all of the challenges of the brief and the context into a physical and intellectual structure which pleases the eye and the mind?
- Is the project based on a clear and coherent set of aspirations and intentions, and does the design match up to these?
- Are these aspirations and intentions realistic, and does the project appear to be viable?
- Are the design skills available, and the amount and quality of thought that have been applied, adequate for the demands of the project?
- Is there evidence of thought: does the project probe the propositions of the brief and the building type?
- Does the design appear to offer good value?
- In the case of a publicly funded project, is the project a realistic contender for the Prime Minister's Public Building of the Year Award?
- Is the design grounded in a clear set of ideas about how the project will be procured and delivered?
- Are the budget and the programme realistic?
- Where appropriate, does the project take advantage of opportunities to innovate? Is there a willingness to take risks?
- Is there a genuine understanding of sustainability issues, and a commitment to a project which is sustainable when taken in the round?
- Will the project result in an improvement of the quality of the environment of which it is a part?
- Does the project make a generous contribution to the public realm, to benefit people in general as well as the building users?
- Is the design all of a piece, so that the parts relate to the whole? Do the design approaches at different scales, from site planning and landscape design to building detail, recognisably form part of the same project?
- In the round, does the project raise the spirits or depress them? Does it bring more to the world than it takes away?



EXHIBIT C: SOME ALARM BELLS

Each unhappy project is unhappy in its own way, but there are some common threads which can be drawn from those projects which CABE's design review committee has found reason to criticise. Obviously in many cases these are simply the lack of, or the opposite of, the qualities we have set out as desirable. Some of these problem areas are listed here; more may be discovered by reading the reports on individual projects on the website.

- Lack of evidence of client commitment to a quality outcome
- Lack of a clear brief
- Contradictory aims and objectives
- Lack of viability; projects may promise more than anyone believes they can realistically deliver
- No evidence of understanding the nature of the site
- Adequate context analysis, but no evidence of it informing the design
- Projects which appear mean, pinching, obstructive in their approach to the public realm
- Lack of clarity about what is private and what is public
- Projects where it is hard to work out from the drawings what is actually proposed: confusion on paper is likely to correspond to confusion in reality
- No effort to give clear and realistic illustrations of what the project will look like
- No effort to illustrate the project in context
- No effort to show an approach to landscape design where this is important



EXHIBIT D: The Potential Value of Good Urban Design

	Economic Value	Social Value	Environmental Value
Financial Tangibles	<ul style="list-style-type: none"> ■ Potential for higher land values ■ Higher sale values ■ Increased funding potential (public and private) ■ Higher rental returns ■ Increased asset value (on which to borrow) ■ Reduced running costs ■ Maintenance of value/income ■ Reduced maintenance costs (over life) ■ Better re-sale values ■ Easy maintenance if high quality materials ■ Reduced security expenditure ■ Reduced running costs (energy usage) ■ Reduced public expenditure (on health care/crime prevention/urban management and maintenance) ■ Increased economic viability for neighbouring uses/opportunities ■ Increased local tax revenue ■ Reduced travel costs 	<ul style="list-style-type: none"> ■ Regenerative potential (encouraging other development) ■ Better security and less crime ■ Less pollution (better health) ■ Higher property prices ■ Less stress (better health) ■ Reduced travel costs 	<ul style="list-style-type: none"> ■ Reduced energy consumption ■ Reduced resource/land consumption
Financial Intangibles	<ul style="list-style-type: none"> ■ Potential for greater security of investment depending on market ■ Quicker permissions (reduced cost, less uncertainty) ■ Distinctiveness (greater product differentiation) ■ Allows difficult sites to be tackled ■ Better developer reputation (increased confidence/ 'trademark' value) ■ Future collaborations more likely ■ Enhanced design professional reputation ■ Increased workload and repeat commissions from high quality, stable clients ■ Competitive investment edge ■ Higher quality longer term tenants ■ Happier workforce (better recruiting and retention) ■ Better productivity ■ Increased business (client) confidence ■ Fewer disruptive moves ■ Increased occupier prestige ■ Increased city marketing potential 	<ul style="list-style-type: none"> ■ Reduced public/private discord (more time for positive planning) ■ Greater accessibility to other uses/facilities ■ Increased public support (less opposition) ■ Increased cultural vitality ■ Better quality of life ■ More inclusive public space ■ A more equitable/accessible environment ■ Greater civic pride (sense of community) ■ Reinforced sense of place 	<ul style="list-style-type: none"> ■ Less environmental damage ■ An ecologically diverse and supportive environment

EXHIBIT E: The Potential Costs of Good Urban Design

	Economic Costs	Social Costs	Environmental Costs
Financial Tangibles	<ul style="list-style-type: none"> ■ Potential for reduced land values ■ Higher risk if increased development costs ■ Higher infrastructure costs (public space and social infrastructure) ■ Higher construction costs ■ Higher design costs (professional fees) ■ Greater capital investment ■ Continued private sector responsibility for public/private spaces ■ Higher rents ■ Higher management fees 	<ul style="list-style-type: none"> ■ Higher public investment in design – planning advice, guidance, award schemes, etc. 	<ul style="list-style-type: none"> ■ None
Financial Intangibles	<ul style="list-style-type: none"> ■ Increased design time (not always recognised in fees) ■ More complex management if mixed use development 	<ul style="list-style-type: none"> ■ Risk of no development if design standards demanded are too high ■ Prospect of gentrification 	<ul style="list-style-type: none"> ■ None

When client expectations are met without negative impact on the interests of other stakeholders in an area or on the environment, development might be regarded as a success. Nevertheless, good urban design offers the opportunity to give something to community and public interests as well as to private promoters of schemes. Urban design, like architecture, is a public activity, with impacts felt in the public sphere and often well beyond the site boundaries. However, the nature of development as perceived by the private and public sectors differs greatly.

The public sector primarily sees development as a way of furthering the public interest – raising local tax revenues, creating other investment opportunities and supporting public services and those sectors of society poorly served by the market. The private sector is broadly influenced by the demand for particular forms of accommodation, the cost and availability of financing, by the physical structure of