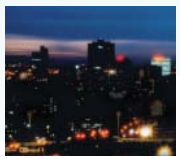
URBAN SUSTAINABILITY FOR THE TWENTY-FOUR HOUR CITY



Development of design decision-making tools & resources

VivaCity2020

SUSTAINABLEURBANENVIRONMENTS

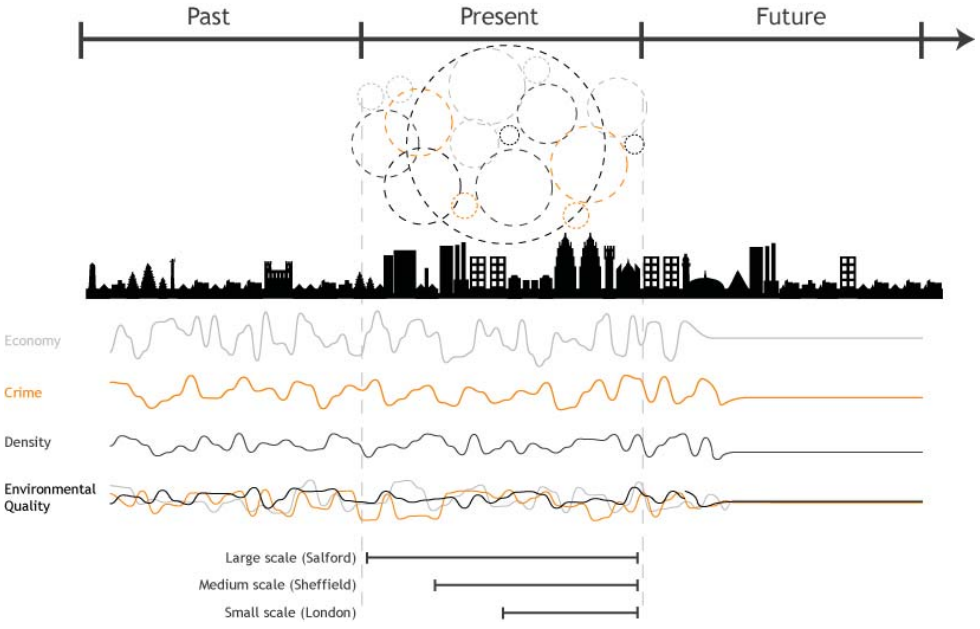
Modern history has witnessed the dramatic rise in city living to the point where most people in the UK now live and work in cities. From the peak of the industrial revolution to the decline of industrial cities to the recent boom in modern city centre living, the UK's cities are constantly adapting to our changing needs. But we cannot ignore the need for everyone to live more sustainable lifestyles. Sustainability is not just a desirable goal; it is a necessity if we want to continue to improve our quality of life and standard of living. Urban sustainability is no small part of this equation.

However in order to live more sustainably we must understand what urban sustainability encompasses and how we can realistically achieve this goal (whilst at the same time recognising that we will never fully reach it as sustainability itself is constantly changing through changing tastes and improvements in technology and standards of living). The Engineering and Physical Sciences Research Council (EPSRC) has responded to the need for more sustainable city living by funding 12 research projects addressing the theme of urban sustainability. VivaCity2020 is one of these projects.

VivaCity is seeking to understand how cities can be more sustainable and how those living in cities can live in a more sustainable way. It is looking at several specific aspects of urban sustainability and addressing these through a new understanding of the urban design decision-making process.

The first three years of VivaCity's five year research programme have been devoted to collecting, analysing and understanding data in eight key areas of urban sustainability.

1. The urban design decision-making process
2. Mixed-use and economic diversity in cities
3. City centre crime and fear of crime
4. The relationship between perceptions of and actual environmental quality
5. How people's knowledge affects the development of the built environment
6. The relationship between housing needs and the types of housing provided in city centres
7. The relationship between the design and accessibility of public toilets and how people use the city centre
8. How ICT can help city developers make more sustainable urban design decisions

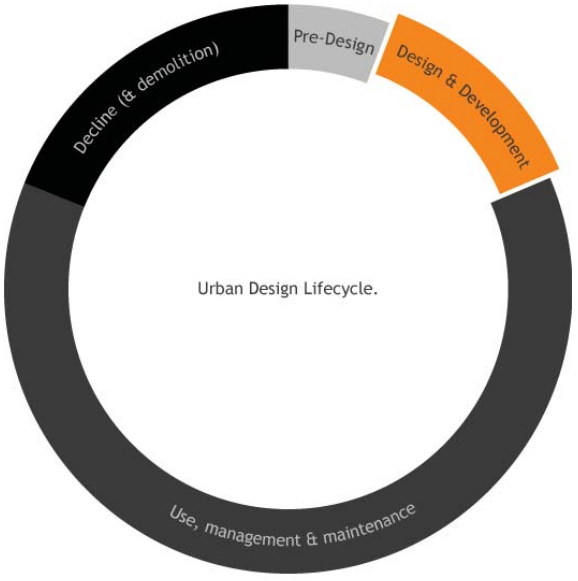


The last two years of the project are dedicated to integrating these research findings to provide an overall picture of urban sustainability. VivaCity will seek to understand the trade-offs city dwellers and city developers make everyday and how they can make more sustainable decisions.

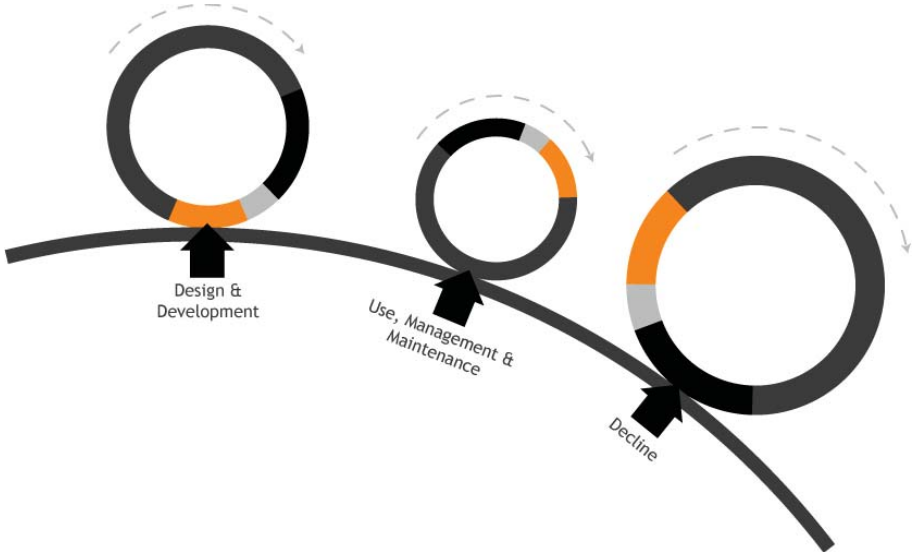
But, this cannot be done until we understand the processes they use to make their decisions: what information they value and what they do not. We know that this will change from decision-maker to decision-maker and from situation to situation. So, is it really possible to effectively influence decision-makers, and if so how?

Urban Design Decision Making Process

VivaCity2020 has identified four stages of the urban design lifecycle.



City developers may have responsibility for a number of projects at any one time and each will be at a different stage in its urban design lifecycle.



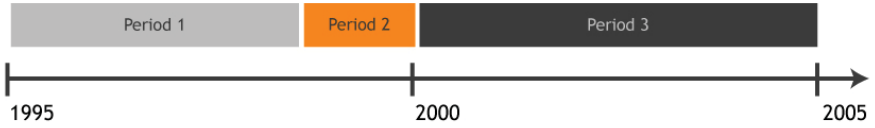
External influences also impact upon projects and a clear and efficient strategy for managing these factors is integral to each project's success. Such a strategy must address new developments as well as regeneration projects and refurbishments.

Researchers at the University of Salford have completed three case studies looking at how city developers make decisions about the projects they are responsible for: (1) the proposed regeneration strategy for Central Salford (a regeneration vision), (2) the development of the Devonshire Quarter in Sheffield (area development) and (3) the Brewhouse Yard development in Clerkenwell, London (a new build).

Decision-making diagrams© Andrew Wootton (2006)

These studies showed that different decision-making processes were used in each of the three case studies. They were:

London & Clerkenwell: The Process
(Brewhouse Yard)

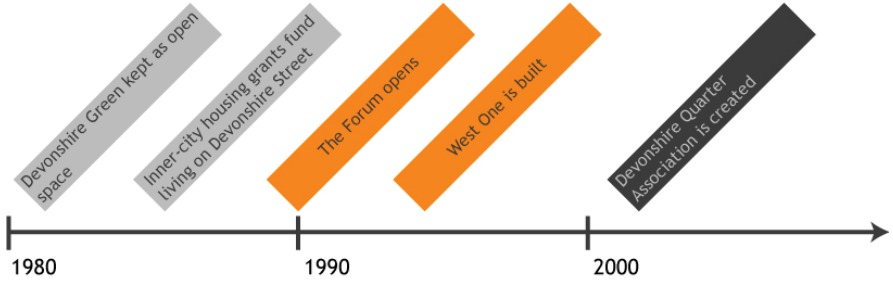


· **1995-1997:** Client buys site, brings in architects. Architects appraise site, identify requirements from Planning and develop objectives. Pre-design discussions begin.
· **1998:** Architects design for outline permission. They consult stakeholders, communicate their objectives to Planning, work on designs with Case Officers and submit applications.
· **1998:** Registered Social Landlord (RSL) is approached by client to provide affordable housing. The RSL seeks funding for project.
· **1998:** Planning evaluates applications using Site brief, design strategy and policies.
· **1998:** Client granted planning permission. A new value is generated for the land so client sells site.

· **1998:** New client buys site, brings in international architects, informally consults Case Officer about site and forms objectives.
· **1999:** Leases Berry House to Internet company.
· **2000:** Dot-com bust. Client loses money on Berry House.
· **2000:** Client sells residential part of site to new client.

· **2000:** New client brings in residential architects. Architects appraise context via outline permission.
· **2000:** Office part of site sold to new client.
· **2000:** RSL receives funding for affordable housing. They help with residential design.
· **2000:** Office and residential is designed. Key stakeholders are consulted and Site is appraised. Planning applications are submitted.
· **2001:** Full planning permission granted. Construction begins. RSL buys affordable housing part of site.
· **2003:** Most of the construction is complete. Defects liability period starts on affordable housing.
· **2003-present day:** Site is monitored and managed by different groups.

Sheffield & Devonshire Quarter: The Process



· **1981:** Council keeps Devonshire Green an open space and creates an urban park on the land.

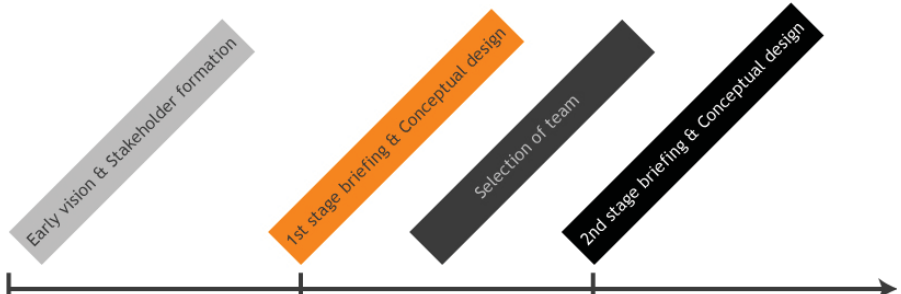
· **Mid-to-late 1980s:** Council allows inner city housing grants to fund housing in Devonshire Quarter.

· **1988:** Broomhall Flats are demolished.

· **1990:** The Forum opens. It expands twice in the 13 years since opening.
· **1991:** Broomsprings, a mixed-tenure development, is built on Broomhall Flats land.
· **1993-2004:** West One is designed and built.
· **1998:** The Devonshire Quarter Association is created.

· **2000:** A skate park is created in Devonshire Green.
· **2001:** The Devonshire Quarter Action Plan is developed.
· **2004:** Sheffield's Urban Design Compendium and City Centre Living Strategy are created.
· **2004/2005:** Council plans to renovate Devonshire Green with help of Devonshire Quarter Association.

Central Salford: The Process



· Early 2002: Chief Executive thinks about a unifying vision for Central Salford to improve quality of life.

· Mid 2002: Chief Executive asks a "face" and others to join him.

· August 2003: A Steering Group is formed to help transform Central Salford. They believe a design competition is the best way to articulate a vision.

· January 2004: The first stage brief for the design competition is written.

· 16 July 2004: Expressions of interest returned by competition consortia.

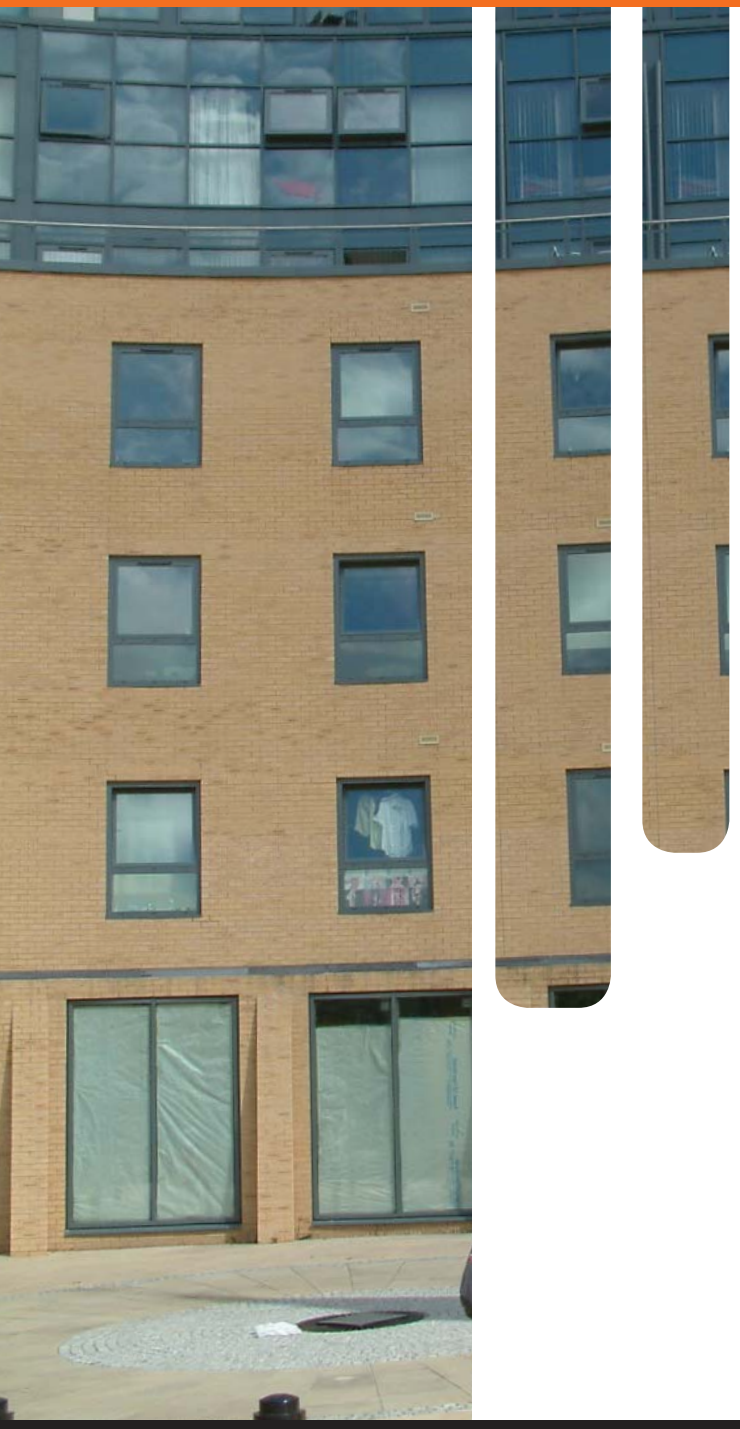
· 27 July 2004: Short-listing of consortia.

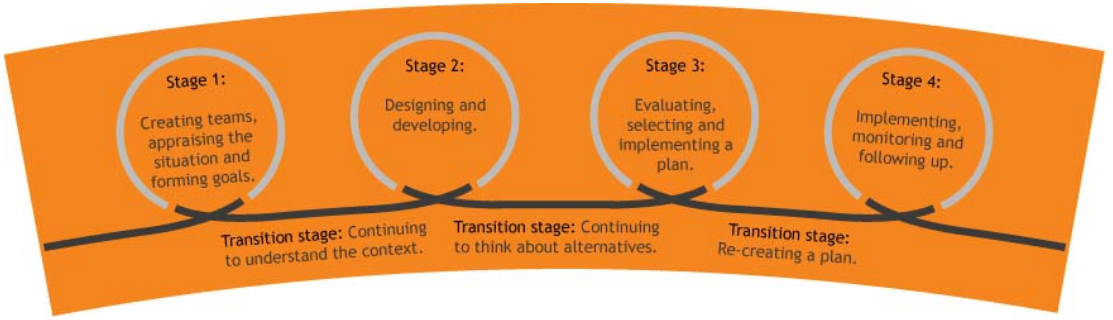
· 29 July 2004: Tenders are issued.

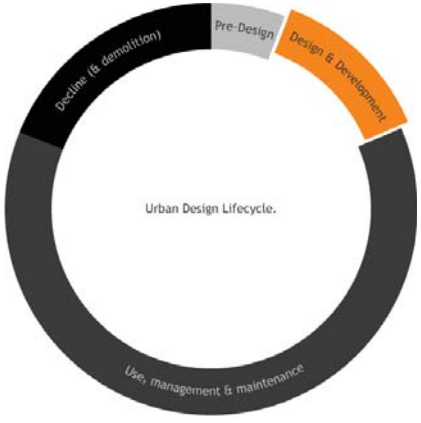
· 12 November 2004: Interview and presentation by competition consortia to the judging panel.

· 15 November 2004: Appointment of winning competition consortium.

· Winter- Autumn 2005: Study to create vision and regeneration framework is conducted. Various stakeholders are consulted.







VivaCity has taken these case studies and additional work in the field and has developed an overarching, four-stage, urban design decision-making process.

This 'as is' decision-making process is now being developed and improved to create a 'to be' process that will better meet the needs of various decision-makers.

The research discovered that having historical knowledge of a place is key to making successful urban design decisions. Local authorities need personnel who possess an intimate and historical knowledge of a place or access to this information when making urban design decisions.

The research has also identified the importance of tacit and explicit decision-makers who can be classified as decision approvers, takers, shapers and influencers. These decision-makers have a profound effect upon the urban environment, but this effect is often not explicit or easy to quantify.

Further work is being undertaken to identify how to increase the ability of these decision-makers to make more sustainable decisions.

Urban Policy

Two emerging themes from VivaCity's research are the importance and influence of density and mixed-use on the urban environment. To understand these themes VivaCity has undertaken an extensive review of current literature and models as well as consulting with key agents of change at all tiers of governance. Researchers have extensively interrogated current urban policy on city planning, density, economic regeneration and development in the context of sustainable development and quality of life.

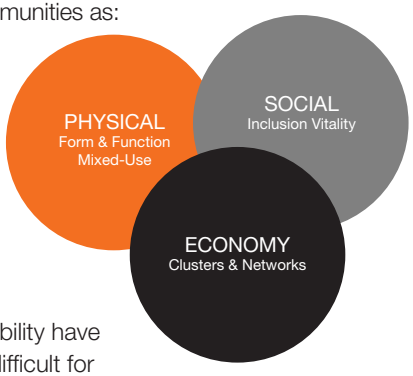
Various definitions of sustainability and urban sustainability exist.

Planning Tools

There are three commonly agreed pillars of sustainability: economic, social and environmental. But, it is clear that these require triangulation, integration and joined-up policy in order to be effective. Recently the UK Government has identified a fourth and fifth pillar of sustainability: governance and science. Governance incorporates the co-operation, partnership and participation of different stakeholders (such as planners and architects) in the urban design lifecycle and science stresses the importance of sound science and research to support sustainable living.

At the Rio Summit the concept of sustainability was applied to cities as: the ability of the urban area and its region to continue to function at levels of quality of life desired by its community without restricting the options available to present and future generations or causing adverse impacts inside or outside the urban boundary.

Furthermore, The Department for Communities and Local Government (formerly the ODPM) has recently identified sustainable communities as:



- Active, inclusive and safe
- Well run
- Environmentally sensitive
- Well connected
- Thriving
- Well served
- Well designed and built

Because the concepts of sustainability and urban sustainability have not been clearly conceptualised or defined it has made it difficult for the Government, businesses and the public to effectively address the issues they raise. The Government is currently actively promoting mixed-use developments as the key to sustainable communities. But, many questions on the viability of mixed-use exist, such as:

- What factors make for successful mixed-use?
- What degree of mix qualifies as mixed-use?
- What tools and guidance are needed?
- What scale of mixed-use works?
- What are the amenity needs and standards?

VivaCity has sought to address these questions through three case studies in London, Sheffield and Manchester.

The research undertaken by the Cities Institute at London Metropolitan University has found that most mixed-use is often only dual use: residents and businesses, and that social housing (both existing and new) is an important element in this mix. The mix of uses works best at the horizontal level of streets and neighbourhoods and does not work as well at the vertical level of high rise buildings, although more research is required to confirm this. Furthermore, the mix cannot be socially or economically engineered.

Land-Use

Ground Floor

First Floor

The case study research confirms that there is a growth in inner city and city fringe living and that trade-offs are being made with regard to where people live. Residents actively consider dwelling type, size, layout, location, security, access to transport links and the vitality of the area when deciding where to live. They give the highest priority to location factors such as proximity to the city centre and desirable amenities as well as accessibility.

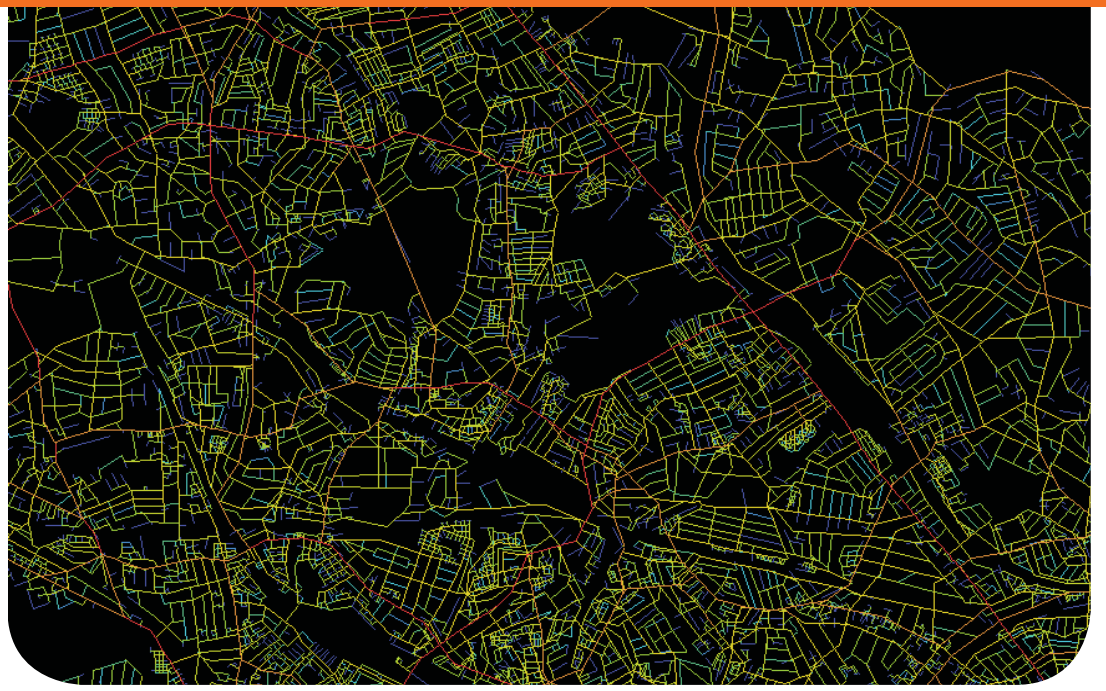
The provision and quality of amenities is key to the success and sustainability of mixed-use areas, but many issues can interfere with this formula. Distributing the costs of providing amenities between public and private money can muddy the waters. The issue is further obscured by the Government as it has not provided a planning use class for mixed-use. Thus, there is no guidance, investment category, or working definition for successful and sustainable mixed-use developments and there remain varying degrees of integration and separation of land-use within mixed-use areas with different degrees of success.

Urban Form

Urban diversity and mixed-use seem to be what cities are about and what makes them worth living in. But, is it socially and economically sustainable? Mixed-use can be associated with a higher level of social risk, especially through crime and social disorder. Is this necessarily in the scheme of things or can we have diversity with social benefits rather than social costs?

Cities are very complex systems, but they grow from a simple idea: they are large, dense aggregates of buildings linked by space. The space takes the form of a linear network: a street network. It's what is seen when a city is looked down upon from above. If people moved from everywhere to everywhere else by the simplest routes, then some streets would get more movement through them than others. A purely spatial analysis of the street network turns out to be intimately related to how the city works, and provides a clear link between urban structure and function. Space Syntax was the first to show that mathematically calculated networks mirror actual movement.

The impact of the physical architecture of cities on movement causes cities to self organise. Movement seeking land uses such as shops migrate to locations which are already movement rich. These uses attract more movement, which then attract other, more diverse uses. These evolving centres and sub-centres then interact with each other. This cycle of multiplier effects is how cities acquire their essential form of a dominant network of linked centres and sub-centres set into a residental background.



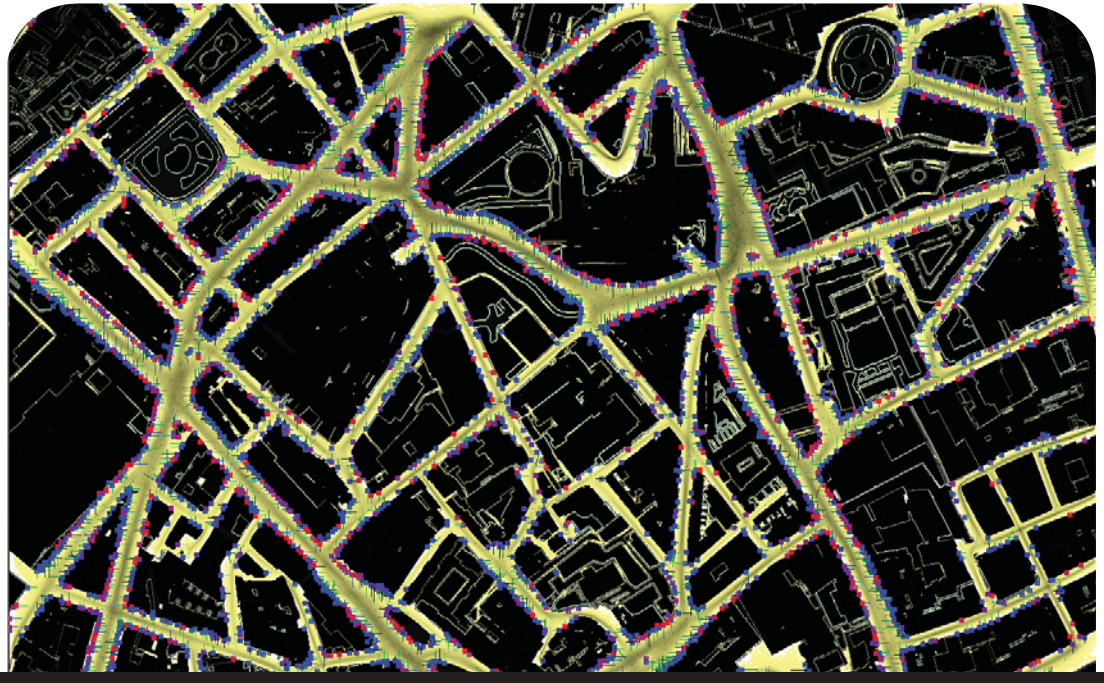
It is this property of polycentricity that makes cities worth living in. It is this that expresses best what cities are about: machines for producing dense low cost contact. It is this that makes them economically powerful and it is the dual pattern of mixed-use centres and sub centres set into a residential background that allows economic and social life to co-exist. VivaCity believes that spatial modelling can provide a common language for cities, and integrate different kinds of evidence both in research and in evidence-based design. This is the theoretical platform from which VivaCity is trying to understand the current problems and potential of mixed-use and diversity in cities.

The Bartlett School of Graduate Studies at University College London is using computer generated agent models to try to understand the dynamics of these processes. Simulated pedestrians navigate according to what they can see. They 'shop' for specific categories of goods and shops survive according to their success in attracting a passing trade. This depends on both location and the clustering of shops offering similar goods. Interestingly, the most diverse streets in reality are often less favoured sites in the simulation so there must be other processes at work; for example, can diversity sometimes be a result of economically marginal locations?

Understanding the relationship between residential and mixed-use areas, and the different gradations between them, is a key VivaCity theme. Folklore has it that Paris organised social classes vertically in urban courtyards, from the bourgeois on the main floor to the poor in the upper garret. Berlin did it horizontally, with the rich at the front and the poor at the back. London used the different faces of the urban block so that as you moved along the street you continued to pass the same grade of housing, but when you turned a corner it changed. The line was the urban organiser. All these systems allow the poor and the rich to live close to each other and it is one of the ways in which cities allows people and uses to co-exist in the same area.

But what about the downside of diversity and mixed-use: the crime and social disorder which many believe it encourages?

UCL has developed a micro-analysis technique for analysing crime data, which is called High Resolution Crime Analysis for Urban Street Networks. It combines a recently developed kind of high resolution Space Syntax analysis with the data handling capability of Geographic Information Systems (GIS).



This new technique, combined with additional case study research has revealed new lines of thought and investigation such as:

Multivariate analysis of residential burglary and street robbery data has led to findings which indicate that:

- Crime decreases with increased ground level housing density
- Housing type affects crime, with purpose built flats and terraced houses having reduced crime rates when compared to converted flats

Preliminary findings also suggest there is an important safety in numbers argument which applies both to people on the street and to the number of dwellings close to and on the street which is found in both purely residential and mixed-use areas. In effect, something like residential culture seems critical to mixed-use areas, but it cannot be achieved piecemeal. Small numbers of residents in mixed-use areas appear more vulnerable to crime, but larger numbers much less so.

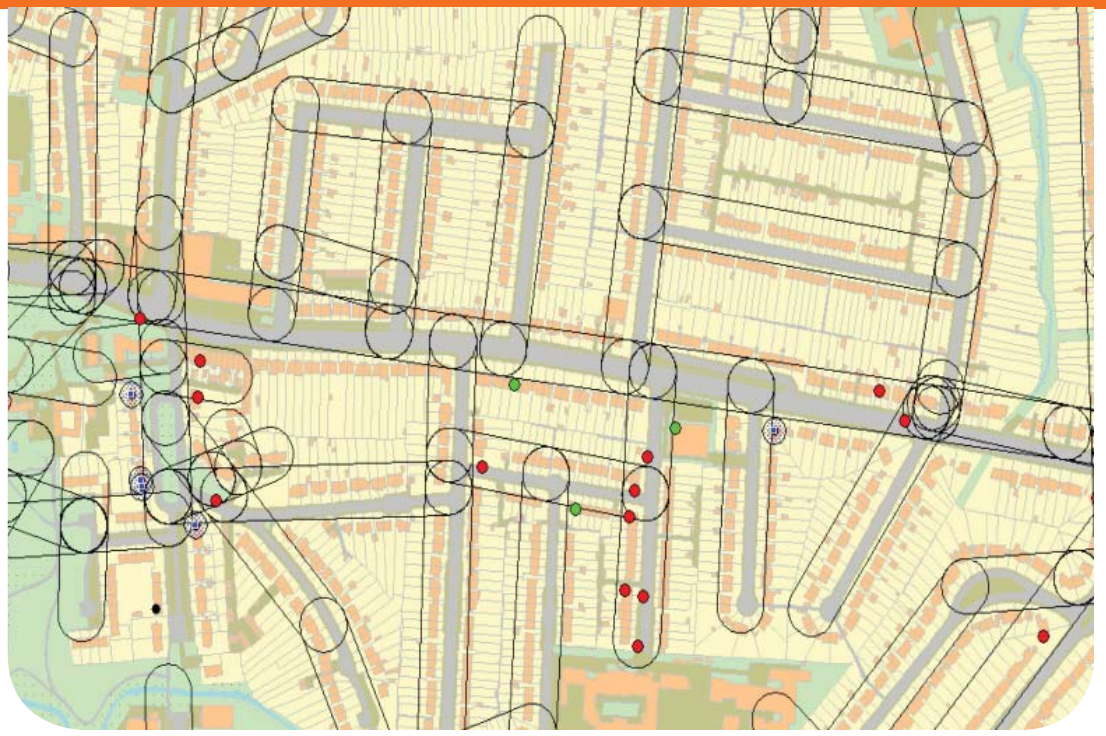
There may also be a critical time-space dimension to robbery where it prioritises different kinds of spaces at different times of the day. At the same time the highest robbery rates are associated with key public facilities such as tube stations, post offices and superstores.

Initial analysis suggests there may be important links between social and spatial variables in burglary. Different social groups seem to be more vulnerable in the same spaces than other social groups. At the same time there appear to be commonalities across social groups. More research is required to discover what these differences and commonalities are.

What then is the effect of mixed-use on burglary and street robbery? Burglary appears to be diffused throughout the city whilst street robbery seems much more focused on the patterns of linked centres often found in boroughs. Does this mean we should avoid the high street? On the contrary, initial research indicates that on average the rate in increase in robbery is substantially less than the rate in increase of pedestrians.

The research also indicates that a substantial proportion of robbery is on the streets intersecting with the high street; this is where people turn from a busier street to a less busy street, so victims tend to arrive one at a time. The highest robbery rates appear to be on streets that are not very busy but link streets that would otherwise not be linked.

The pattern of street robbery also seems to vary with both time and space and the research suggests: don't go on the high street after midnight - but don't leave if before midnight.



Additional research conducted by the University of Salford shows that the retail environment is associated with certain types of crime and anti-social behaviour. Cities such as Manchester and Sheffield have developed techniques for managing these issues. These include: attracting legitimate users by an improved retail offer, increasing the number of city centre residents, closer management of the city centre's infrastructure with extensive use of CCTV, ASBOs, street crime wardens, secured parking and security staff in shops and shopping malls. There are ongoing issues related to social exclusion such as: impact of crime on business, concerns of city cleanliness, failure to cater for all users (like families), conflict between different user groups (like shoppers and skateboarders), exclusion of some groups like beggars and the homeless, as well as a lack of public facilities such as toilets.

The Urban Experience

However, it is only one half of the story to understand how the structure of modern UK cities developed and determining how future development can be more sustainable. The other half of the story lies with the city's residents and workers and understanding how the city impacts their experiences.

Researchers at the University of Salford, University College London and the University of Sheffield have developed an innovative methodology to engage local residents and businesses in deliberations about their local environment. The methodology asks people to be conscious of their sensorial experiences in the urban environment, including sight, sound, smell, taste and touch and has proved a very effective way of engaging people both on literal and metaphoric levels. The information this reveals is combined with environmental data taken from direct monitoring of environmental conditions both inside and outside people's homes. Interrogating each sense in this way provides interesting findings.

Sound – the hum of traffic is the keynote sound in urban areas although urban layout plays a key role with notable quiet streets emerging onto arterial thoroughfares. Not all residents respond to sound and noise in the same way; some enjoy the buzz and use local sounds to help regulate their relationship with their neighbourhood while others find the same sounds intrusive.

Availability of tranquil spaces is seen as a key quality of life issue. Analysing the European noise policy process revealed a disparity between noise policy that focuses on noise abatement (the top-down idea of noise as unwanted sound to be measured and regulated within certain metrics) and local soundscapes that include people's subjective responses to environmental sounds where some sounds are desirable and others are not.

Smell - smells from local food outlets are found to make significant olfactory impressions although no residents suggest eliminating smells altogether. Improved ventilation is discussed by residents. Smells associated with the stench of vomit and urine on city streets are associated with a lack of public conveniences and the research found that residents perceive a gap in who is the responsible authority for providing toilet facilities. Researchers at UCL have audited a total of 101 premises in Clerkenwell alone, of which only 54 had a toilet that was accessible and none of these complied with design standards in all respects (of a 50 point score the highest had 31 points). One design recommendation appears to be notably absent from all but one of the facilities audited, this is the provision of a colostomy shelf. This is due to shelves and flat surfaces being disliked by providers due to their association with illegal substance use. Such an omission of what some users consider an essential fixture highlights the dilemma between 'access versus fortress' in away from home toilet design, where the design focuses on the behaviour of a minority over the needs of the majority. Researchers have also developed over 40 personas (designed to help designers understand the needs of different user groups) along with a toilet auditing tool. They are also developing a resources pack to be used by designers as there is no current Government policy on the provision of public toilets.

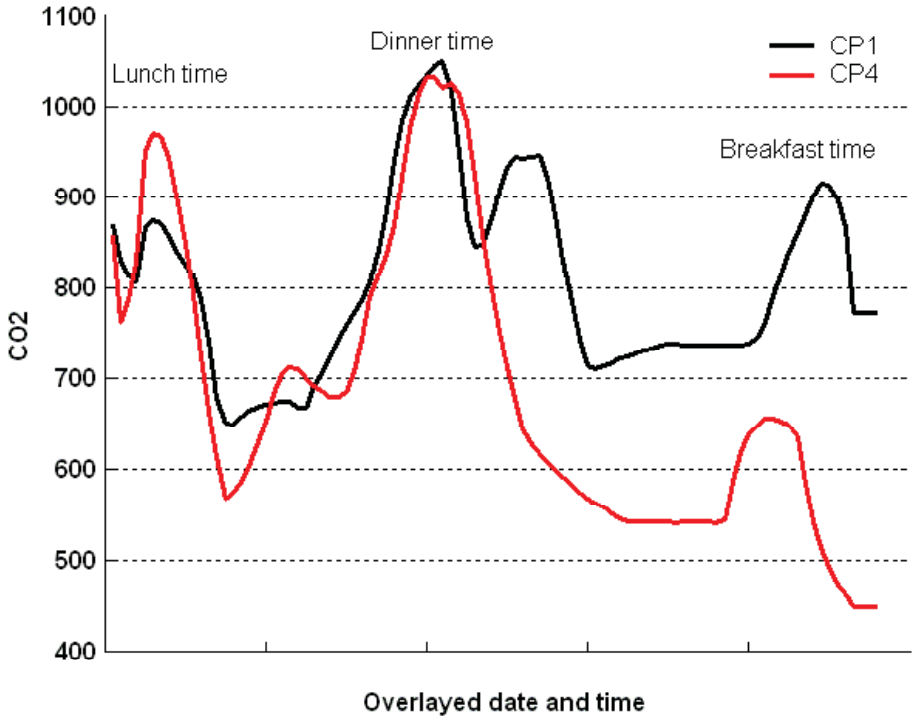
Taste - discussion in Clerkenwell often focused on the variety of food establishments in the city. Many residents welcome the variety although some feel the balance is not right in terms of affordability, quality and fast food outlets. Discussion of culture also arises with a focus on the diversity of the area although many residents feel that different social groups don't interact with each other. This is possibly because their lives are centred on different interests. Residents also identify a distinction between older and newer residents in the area over how much neighbourly interaction they want, with some wanting more and others less.

Sight - In the Clerkenwell case study the history of the area was found to be important to residents. Most feel it is important to preserve the area's architectural heritage and to redevelop old buildings rather than replace them. However, the Sheffield case study suggests that residents there feel differently about their urban environment. In Sheffield modern architecture is seen as important as long as it is 'good modern architecture'. Residents place a high value on the view from their home, but also feel a lack of control over their views and don't think they have any real influence in the planning process. Against this background, VivaCity is studying the detailed morphology and performance of different housing areas and how they meet or do not meet residents' needs. Initial findings indicate that older housing stock is more adaptable to different ways of living (such as extended families) whereas newer stock tends to favour one demographic with little scope for change to meet the needs of others.

Touch - people often relate this to how they feel rather than what they feel and discuss issues of personal safety. Most people feel safe in their local area but self-censor their mobility at particular times or in particular places. Additionally people are concerned about the condition of pavements and positioning of street furniture. A residential survey conducted by London Metropolitan University in Clerkenwell has shown that residents' perception of their environment is linked to their perceptions of the presence of people associated with specific uses. For example, customers of pubs or clubs are frequently viewed more negatively than workers in an office. Residents also react to the amenity value of different businesses. So, the amenity value of a pub is often seen as lower than the amenity value of retail outlets.

Local 'door-step' issues such as litter, graffiti and fly-tipping are a critical part of residents' perceived quality of their outdoor environment and their quality of life. Photo-surveys undertaken by residents in the case study areas highlighted diverse environmental conditions. Analysis of photos combined with the pollution data shows an unequal distribution of environmental conditions across each case study city.

CO2 levels in two homes in Clerkenwell



Actual outdoor environmental conditions vary between cities and at the micro-scale within each case study area. However certain similarities are evident. Outdoor CO levels are low in both Sheffield and Clerkenwell, falling well within EU guidelines. Recorded particulate matter data is also relatively low and is within EU guidelines. Noise levels vary considerably depending upon location; however trends can be identified based upon the time of day with some recorded levels being very high (above World Health Organisation recommendations). There are also seasonal variations in outdoor environmental conditions. CO and noise levels vary between summer and winter however the extent of these differences needs to be explored further.

Indoor environmental data taken over the winter in Clerkenwell found that temperature and CO_2 did not comply with standard guidelines. This reflects a common trade off between achieving proper ventilation and thermal comfort indoors. The age of a home can influence some environmental factors, such as temperature and CO_2 with flats and homes with double glazing able to keep the heat in the home more effectively than single houses or homes without double glazed windows and doors. Indoor noise levels in Clerkenwell were within World Health Organisation guidelines, under 55 decibels. Noise over this can cause annoyance. Particulate matter was also within guidelines.

VivaCity has found that the impact of the urban form upon residents has implications for urban designers and developers

- Key deliberations about urban design do not adequately involve local people. Many are unaware of the timing of planning decisions and their scope for involvement.

- People have valuable understandings of their local environment that would be beneficial to urban designers if it were adequately tapped into.

- Even people who are not actively involved in their communities and could not be described as community activists can be targeted for their input. Recruitment is a time-consuming process but with effort a diverse range of participants can be mobilised Using a qualitative methodology such as that used by VivaCity would give urban designers a better understanding of the starting position of the local community.

- There are implications of designing to measurable noise levels. This raises questions about what it means to have a local soundscape, who can legitimately decide what is valued, how decisions can be reached regarding what sounds are positive and negative and what should be preserved.

- People's perceptions of their urban environment may be significantly improved by addressing 'door-step' issues such as litter, graffiti and fly-tipping at the design stage, possibly by providing mechanisms for preventing or minimising the impact of such activities. Moreover, the provision of suitable infrastructure for enabling more sustainable behaviour, such as recycling provisions, should be incorporated at the design stage.

- By monitoring noise and air quality continuously at the street scale it is possible to highlight trends and spatial variations which can be used by urban designers when considering the layout of new developments or regeneration projects.

- There are clear and strong links between environmental quality and other sustainability issues such as crime, social makeup, economic diversity, urban regeneration and renewal clearly illustrating that an integrated approach to urban design is required.

Work Package 8
ICT Support Solutions
Salford

The knowledge developed in work packages 2 to 7 will be presented in alternative ICT solutions, according to the findings of the requirements capture with stakeholders undertaken in work package 1 and drawing upon nD modeling and VR technologies.

Work Package 4
Environmental Quality
Sheffield/Salford/UCL

How do issues of urban ecology such as noise and traffic pollution impact on users' perceptions of the city environment and their quality of life? This work package is investigating quality of life within city centres with specific attention paid to the environmental issues of air pollution, noise, lighting and thermal comfort.

Work Package 6
Community Pattern Book for Housing
UCL

What makes housing attractive to different sub-groups within contemporary, multi-cultural society? Much of the existing housing stock is occupied by people from a variety of cultural backgrounds. It is therefore important to establish the extent to which the housing preferences of ethnic minority communities are similar to or different from those of the majority community, as well as to show whether purpose-built housing schemes incorporate design features not found within mainstream stock.

Work Package 1
Process Mapping, Salford

Sustainability interventions are often retrofitted to existing urban designs rather than incorporated into the design process at the outset. For the first time the decision-making process will be mapped and a requirements capture process will be used to identify the needs for tools and resources that enable the sustainable design of urban environments.

Work Package 2
Evolution of Land Use Diversity
LMU/UCL

There is a critical gap in understanding faced by urban designers and planning authorities: How do the mixed uses and diverse economic and social networks that characterise vital urban areas evolve? How do these relate to the design of urban areas? How can a plan be created to achieve diversity whilst minimising the undesirable side effects of neighbouring land uses within the dense 24-hour city?

Work Package 3
Secure Urban Environments by Design
Salford/UCL

Two key questions face planners, designers and developers that until now researchers have failed to adequately address: How can the open and permeable residential environments required for sustainability be achieved without incurring actual or perceived increases in crime? How can facilities in city centres be designed to attract legitimate users, whilst also minimising crime?

Work Package 5
Generation of Diversity
UCL

An experimental counterpart to the observation based work package 2, work package 5 will seek to adapt existing agent-based micro simulations developed under a UCL Platform Grant. These will be used to address a series of basic theoretical questions, and ultimately to test different policy and design proposals.

Work Package 7
Public Conveniences in City Centres
UCL

How can high quality, accessible public amenities be provided cost effectively? This work package is developing an Illustrated Design Digest for use by designers, planners, private companies and public sector organisations that will deliver sustainable, accessible, affordable and inclusive public toilet provision in city centres.

The ability of city developers, residents and workers to make more sustainable decisions relies upon them having accurate and relevant information. However, it is currently not easy to access this information, if the information exists at all. VivaCity seeks to fill these gaps by understanding what makes cities sustainable, how this information is used to make decisions and how decision-makers should receive this information. VivaCity is developing a toolkit of resources decision-makers can use to navigate urban sustainability issues. The toolkit will be flexible enough to incorporate future urban sustainability research and will address current and future urban sustainability issues by giving decision-makers the tools to go beyond current information and to think about sustainability and cities in a holistic way, identifying overlaps and trade-offs as the drivers of decision-making.

If you would like to know more about VivaCity2020, please contact the project manager, Joanne Leach, or visit the website at www.vivacity2020.org

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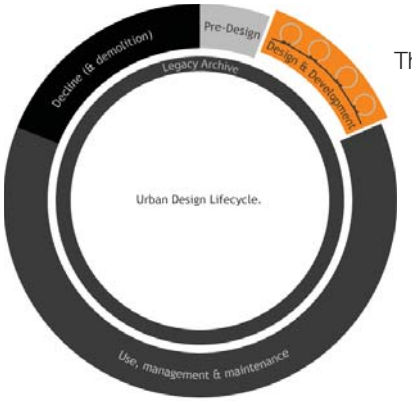
The Urban Design Decision-making Process

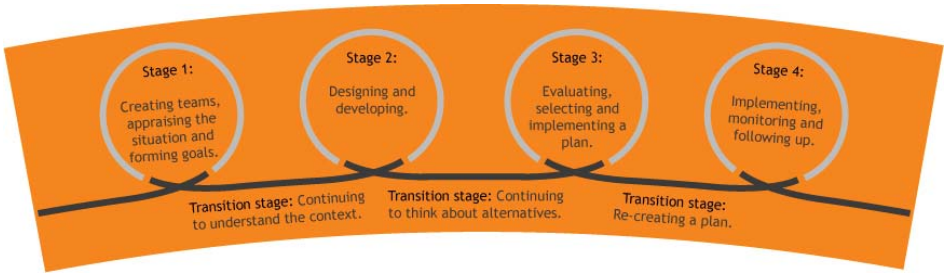
Four stages of the urban design decision-making process:
1. Pre-Design
2. Design and Development
3. Use, Management and Maintenance
4. Decline (and Demolition)



The historical knowledge of a place – a legacy archive – is key to making informed urban design decisions.

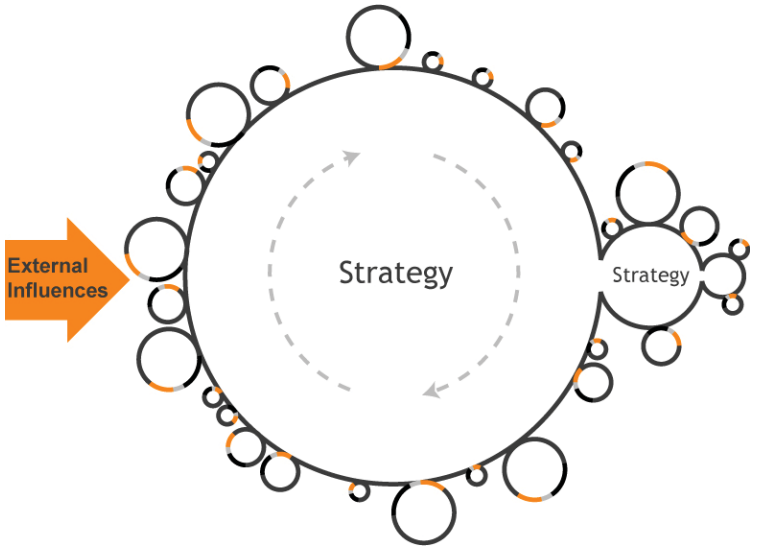
City developers have responsibility for a number of projects at any one time and each will be at a different stage in its urban design lifecycle.

The current design and development decision-making process has four stages, each with a transition stage. This is currently being adapted to create a 'to be' process that will better meet the needs of various decision-makers.



External Influences

External influences impact upon urban design projects and a clear and efficient strategy for managing these factors in integral to each project's success.



Decision Makers

	Central Salford	Sheffield Devonshire Quarter	Clerkenwell
Decision Approvers	Elected representatives	Elected representatives	Elected representatives
Decision Takers	Central Salford URC, Planning/Salford City Council	Planners	Case officers and planners
Decision Shapers	Appointed consortium	Private and public land owners	Architects, Designers, Registered social landlord
Decision Influencers	Local residents, businesses and key organisations	Devonshire quarter association, Devonshire quarter retailers association	Local residents

Tacit and explicit decision-makers such as decision approvers, takers, shapers and influencers have a significant impact upon the urban design decision-making process. However, their impact is not easy to quantify.

Urban Policy

The Government is currently actively promoting mixed-use as key to sustainable communities.

- What factors make for successful mixed-use? Social housing is an important element.
- What degree of mix qualifies as mixed-use? Most mixed-use is only dual use: residences and businesses. Residents are an important factor to reduce crime.
- What tools and guidance are needed? Successful mixed-use cannot be socially or economically engineered.
- What scale of mixed-use works? Mixed-use works best at the horizontal level of streets and neighbourhoods and less well vertically in tall buildings.
- What are the amenity needs and standards? Residents actively consider location, security, access to transport links and the vitality of the area when deciding upon were to live

Urban Form

Urban diversity and mixed-use seem to be what cities are about and what makes them worth living in but is it socially and economically sustainable?

The impact of the physical architecture of cities – the urban form – on how people move through a city causes the city to self organise. Movement seeking land uses such as shops are attracted to locations that already have a lot of movement. This creates centres and sub centres within the city.

Mixed-use can be associated with higher levels of crime and social disorder, but does this have to be the case? Not necessarily. Having residences in mixed-use areas can reduce crime and recognising that certain crimes occur more frequently at certain times of the day can allow them to be more efficiently targeted. However, cities that use retail to attract shoppers also attract crime and need to anticipate this and take preventative measures.

Urban Experience

The impact of the urban form upon residents has implications for urban designers and developers

- Key deliberations about urban design do not adequately involve local people. Many are unaware of the timing of planning decisions and their scope for involvement.
- People have valuable understandings of their local environment that would be beneficial to urban designers if it were adequately tapped into.
- Even people who are not actively involved in their communities and could not be described as community activists can be targeted for their input.
- There are implications of designing to measurable noise levels. This raises questions about what it means to have a local soundscape, who can legitimately decide what is valued, how decisions can be reached regarding what sounds are positive and negative and what should be preserved.
- People's perceptions of their urban environment may be significantly improved by addressing 'door-step' issues such as litter, graffiti and fly-tipping at the design stage. The provision of suitable infrastructure for enabling more sustainable behaviour, such as recycling provisions, should also be incorporated at the design stage.
- By monitoring noise and air quality continuously at the street scale it is possible to highlight trends and spatial variations which can be used by urban designers when considering the layout of new developments or regeneration projects.
- There are clear and strong links between environmental quality and other sustainability issues such as crime, social makeup, economic diversity, urban regeneration and renewal clearly illustrating that an integrated approach to urban design is required.

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