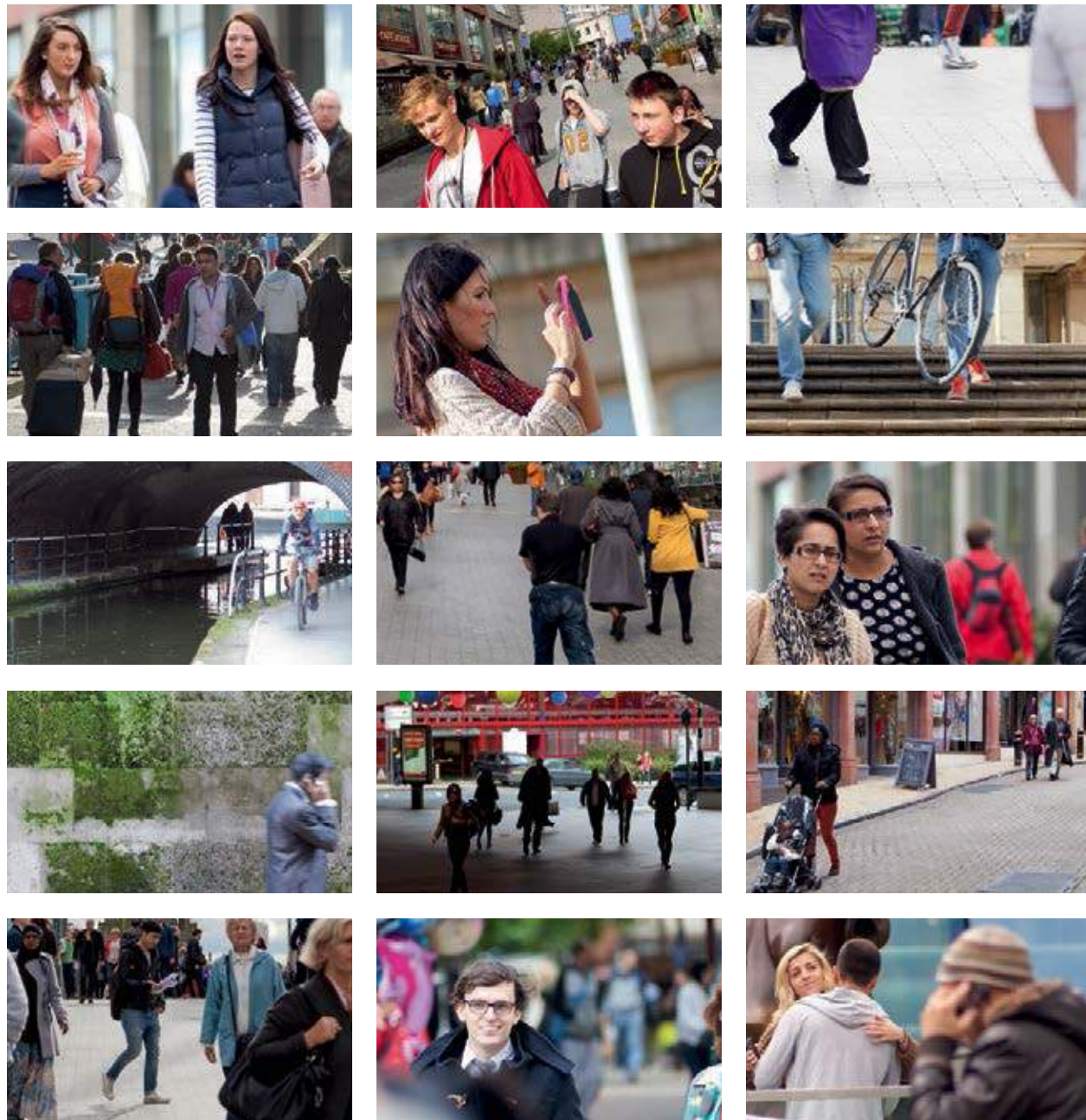


Interconnect

Improving the journey experience





Interconnect: Improving the journey experience

Piloted in the centre of Birmingham, UK, Interconnect seeks to improve the journey experience for people living in and visiting the West Midlands region.

Interconnect delivers a visionary blueprint for connecting the journey experience. The project seeks to improve the quality of information across all media channels, transport services and public environments.

Interconnect is a partnership, project and innovative design approach focused on improving the 'interface' between people, places and transport systems. The project promotes a vision of a world class movement network with infrastructure and passenger facilities designed to create welcoming places supported by legible and intuitive information systems.

In turn the approach is helping attract visitors, tourism and investment that will support new jobs and a stronger economy, building the reputation of the region internationally and contributing towards social, environmental and economic benefits for all.

Piloted for the first time in the West Midlands region of the United Kingdom, Interconnect aims to improve the journey experience for people, whether they are visiting for the first time, or making their daily commute.

In support of the vision, the Interconnect partnership is encouraging new ways of working, enabling organisations to plan, develop and deliver effective improvements to the journey experience.

Investment in ongoing regeneration and renewal projects is delivering radical changes to the region. The benefits of this investment are being maximised by interconnecting transport, tourism, technology and public realm projects to deliver longer-term and smarter solutions to millions of people.

The Interconnect partners are sharing knowledge, identifying mutually beneficial opportunities and maximising investment – delivering major improvements for everyone who lives and works in, or visits the region.

This publication will be of value to other places, cities and regions who wish to improve the journey experience.

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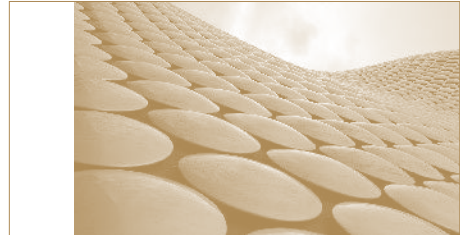
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The journey

Page 5

This chapter looks at how people travel around the region, their individual needs and requirements, and how Interconnect aims to improve the journey experience.



A network of opportunities

Page 17

This chapter introduces a new approach to developing and delivering strategic improvements at every stage of the user's journey.



Delivering the vision in Birmingham

Page 29

This chapter demonstrates the work completed to date in delivering a new information system, transport infrastructure and complementary improvements to streets and spaces.



A connected future

Page 75

This chapter presents a vision for the future of the Interconnect system, building on both the resources developed to date and opportunities presented by emerging technologies.

The journey

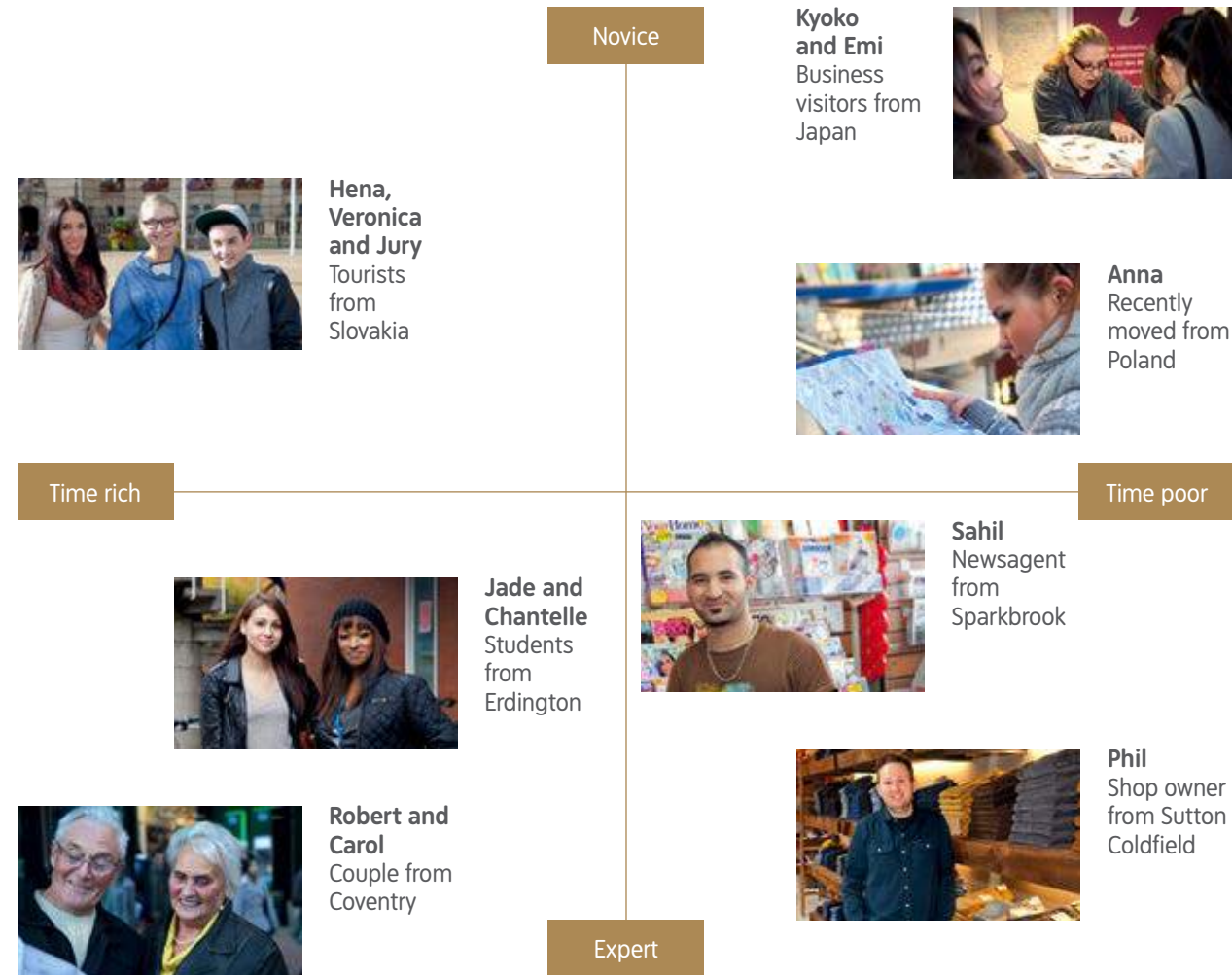


The journey

The Interconnect design approach puts people first by understanding their needs and expectations. By appreciating the many challenges and influences that affect each and every person, significant improvements can be made to all journeys.

The journey

Different people



The needs and expectations of all people from first time visitors to locals have been considered as part of the design process.

The journey

Different journeys

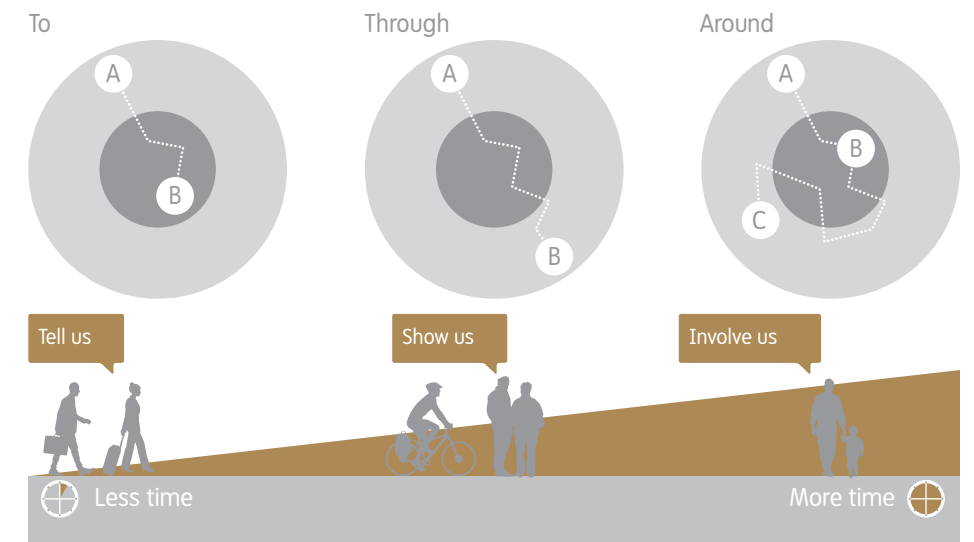
The way that people are able to move around a city directly influences their everyday experiences of it. In turn, ease of movement and legibility are directly related to wider social, environmental and economic benefits.

People's needs are based on many things, including their interests, how they choose to move around, perceptions of distance and time, available transport options and quality of service.

Revealing options about what to do and how to get there in a consistent, simple and intuitive way can help to raise awareness and promote use of public transport.

In any city, the movement network and information to support it should be built around people and their everyday journey needs.

Interconnect aims to bring about significant improvements in the quality of the journey experience by providing the right information for people in the right place and in a way that is accessible to all.



People in a hurry, seeking a specific destination require immediate information to get from A to B. Those with more time often enjoy discovering places at leisure, supported by a range of information services.

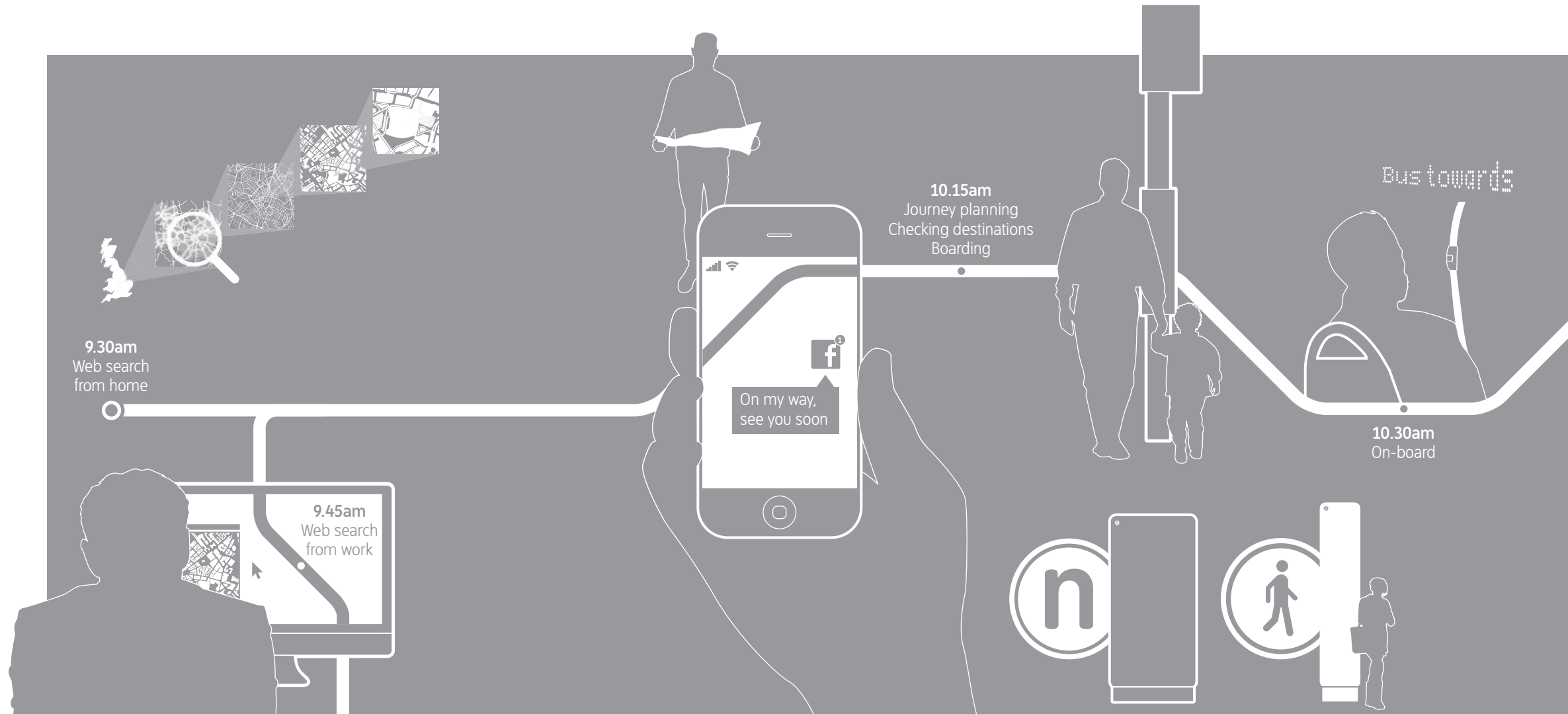
The journey

Connecting the journey experience

Most journeys incorporate several transport modes and involve walking to a greater or lesser extent, with people likely to access many sources of information in many different formats.

Over time, new information products and services will be complemented by improved passenger facilities, streets, spaces and transport services.

This journey illustrates some of the key features that will characterise the Interconnect system.



Journey planning

For many people, their journey starts before they take a step outside. For those who wish to start planning from home or work, online information will be tailored to their needs.

Scalable mapping platform

Adaptable and scalable maps will reveal appropriate levels of detail and content through a consistent user interface at every stage of the journey.

Multi-channel

For people on the move, information will increasingly be customised to their needs and made available using digital services, as well as on-street products and services.

A quality experience

Whether walking or using public transport, the quality of the environment will support journeys and provide a comfortable and enjoyable experience.

Function-led identities

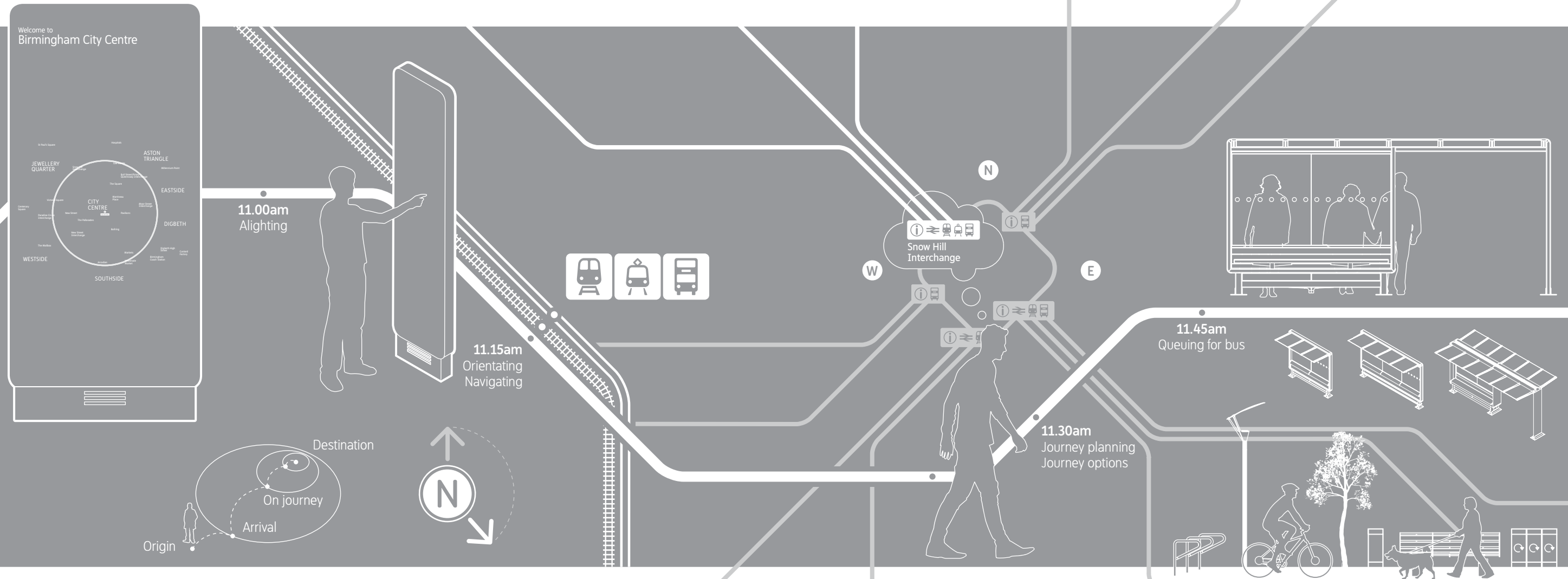
The system will have a unified identity to visually connect all forms of movement across the region. At a local level the system will provide greater flexibility to promote the character of different places.

Service improvements

A modern rail, metro and bus fleet with improved interiors and unified liveries will create a more recognisable and attractive transport offer.

The journey

Connecting the journey experience



A mental map

When arriving in a town or city, visitors will be welcomed by an overview of the place, revealing distances to destinations and what is available in the immediate area.

Progressive disclosure

Information will be progressively disclosed at each stage of the journey. People will be provided with relevant travel choices from their current location.

Heads-up

Heads-up maps that mirror the way the user is facing, will make navigation and interpretation of their surroundings easier.

Modal choice

Multi-modal information will be presented at appropriate journey stages, allowing users to choose the most appropriate form of travel.

Network legibility

Complex movement networks will be planned and designed to make them easier to use. A simple and intuitive visual interpretation of the network will help guide people every step of the way.

Transport interchanges

Interchanges will be highlighted consistently within the network to raise awareness of travel options and improve ease of transfer between different transport modes.

Product language

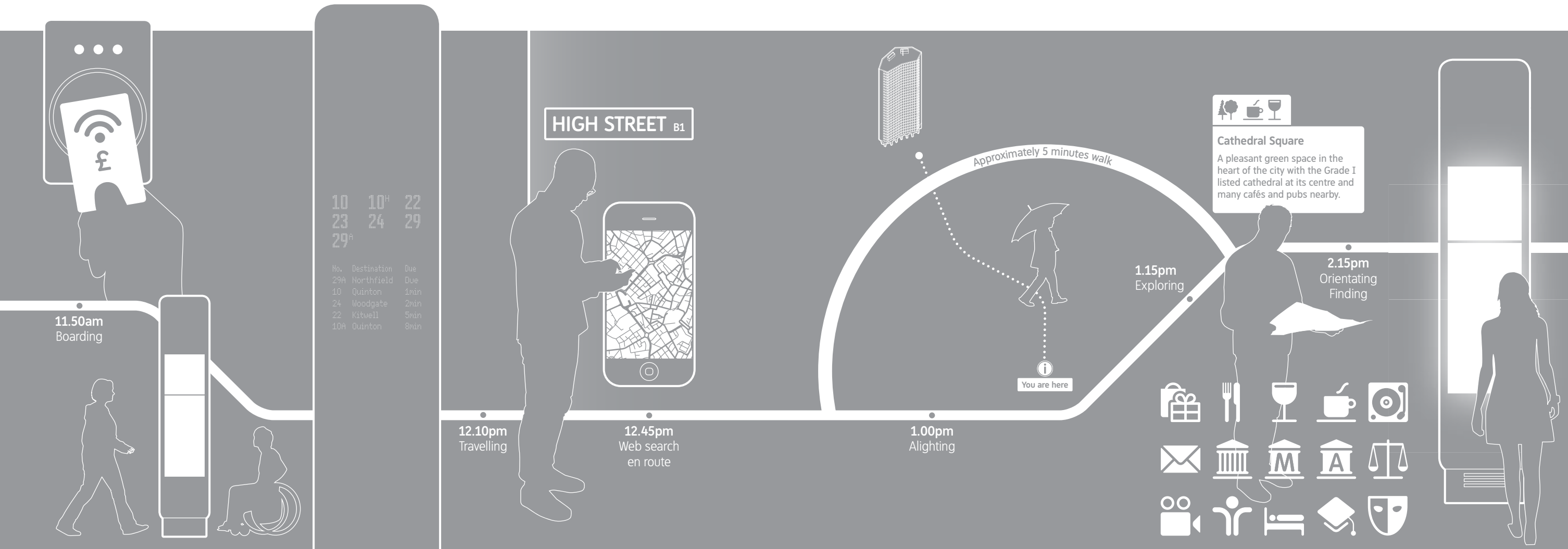
Information totems and passenger facilities such as new bus shelters will have a common product language that is an identifiable and recognisable mark of quality.

Public realm improvements

Improvements to the public realm will be designed to support pedestrian movement and access to public transport by enhancing principal routes and encouraging people to explore on foot.

The journey

Connecting the journey experience



Ergonomics

Information products will be set-out based on ergonomic factors such as optimal reading heights and distances to allow people of all abilities to use the information.

Smarter payment

Cashless, cross-operator ticketing will make the entire network more accessible, speed-up boarding times and reduce the anxiety of using public transport.

Real-time information

Real-time information about when the next bus is arriving or what is happening in the city today, will allow people to make informed choices about how to spend their time.

Walk times

Approximate travel times will be provided en route giving people the option to walk or ride between areas, destinations and transport interchanges.

Activities

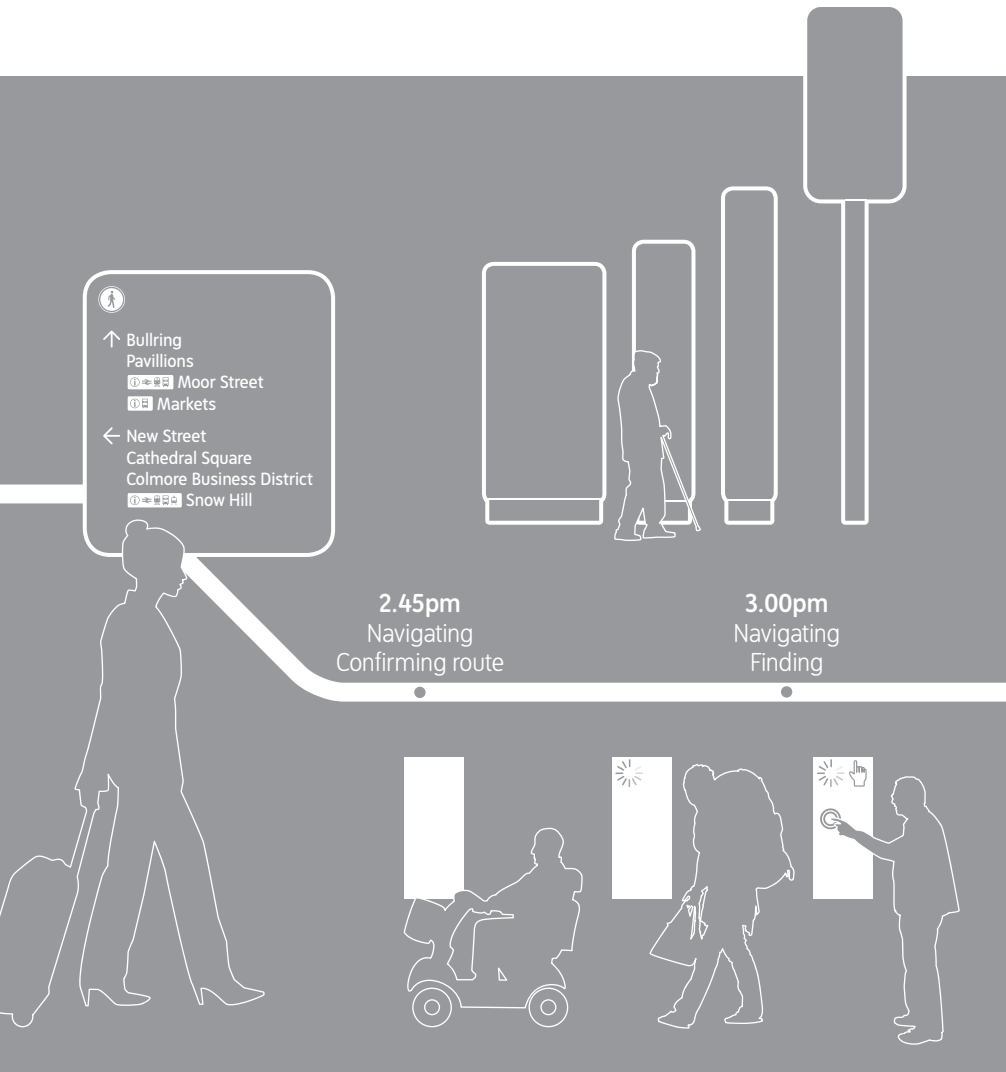
Revealing types of activities within different areas will help raise awareness of what a location has to offer.

24/7

Information totems in town and city centres will be powered and illuminated, where appropriate, providing information 24 hours a day.

The journey

Connecting the journey experience



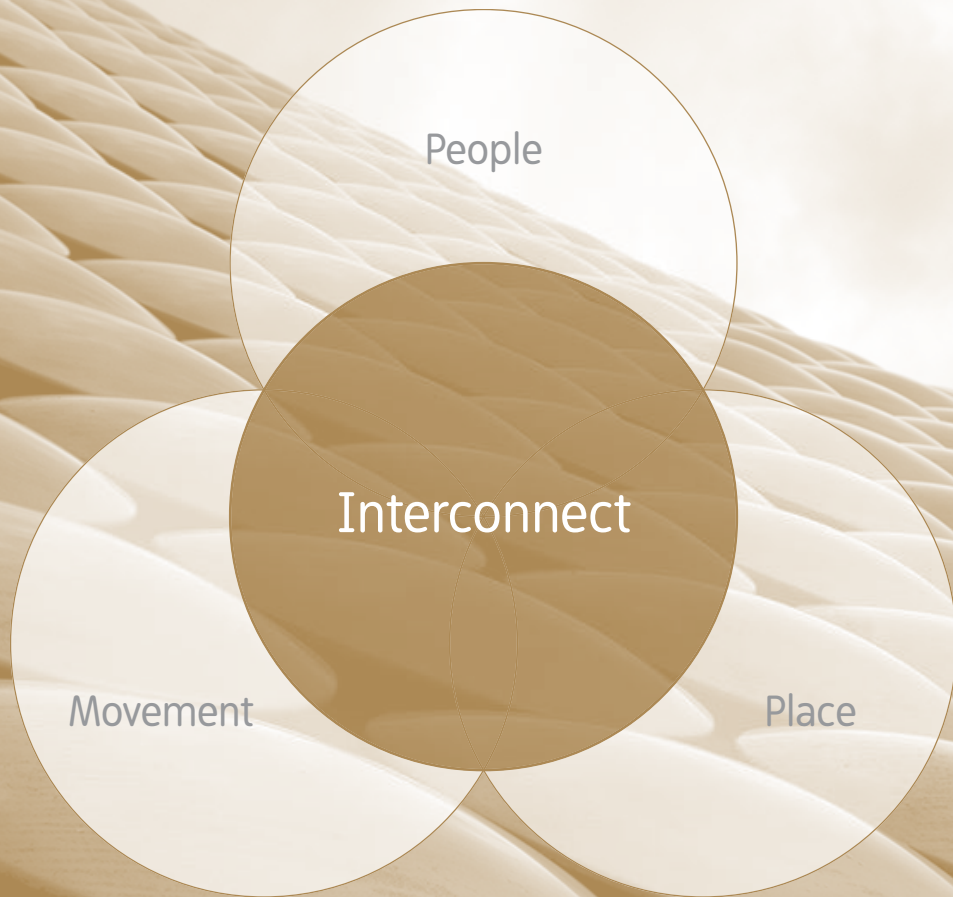
Modular and adaptable

Information signs and passenger facilities will be developed in a modular way, allowing the system to respond to its environment and parts to be replaced or updated easily.

Appropriate technology

Interactive displays will be available in locations where there is a higher demand for more dynamic service information.

A network of opportunities



A network of opportunities

Movement links people with places. A high quality movement network can act as a catalyst and driver for growth and regeneration.

Interconnect represents a holistic design approach that can be applied across the network to all transport services, passenger facilities, information systems and connecting streets and spaces.

A network of opportunities

Whole-journey approach

Interconnect aims to empower people, enhance their quality of life and in turn, support long-term regional prosperity.

For people in the region, Interconnect introduces a step-change in the design of the journey experience. Taking a whole-journey approach to improving every point-of-touch, Interconnect will deliver:

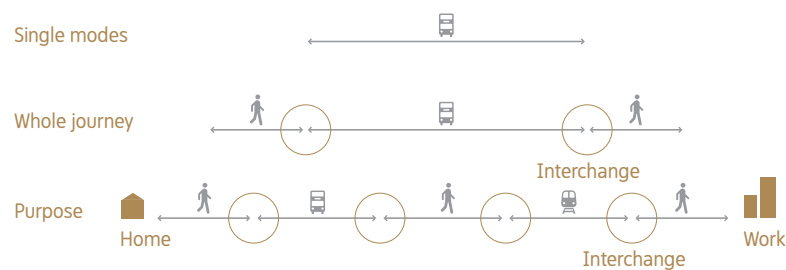
- _A new system of information products and services
- _New passenger facilities such as shelters, stops and associated street furniture
- _Improvements to streets and spaces such as increasing pedestrian space and enhancing the quality of the public realm
- _Improvements to transport services such as network changes, vehicle liveries, new ticketing and better reliability

Whilst this publication focuses on the development of a new information system and passenger facilities, Interconnect is also informing public realm improvements to streets and spaces.

In the future, Interconnect will also support opportunities to improve new transport services ensuring fast, frequent, reliable and easily identifiable services are integrated within a more legible network.

The planning of information and services is traditionally based on individual modes, but in recent years an understanding that a whole journey may include different modes has become key to improving the journey experience.

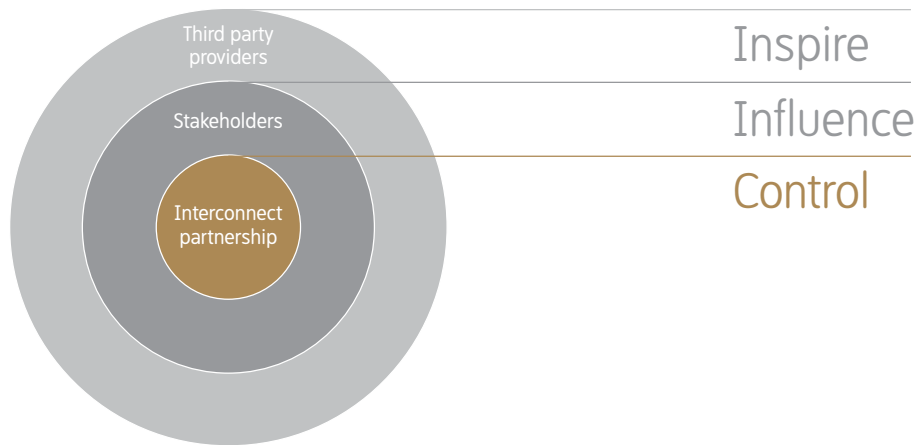
Interconnect takes this a step further by considering the purpose for travelling and tailoring journey improvements appropriately.



A network of opportunities

A new information system

The design of a comprehensive information system is a key part of Interconnect; it allows partners and other information providers to supply accurate and consistent information to people when and where they need it.



The importance of authentic and authoritative information from public organisations is well understood.

However, stakeholders (such as transport operators or visitor destinations) and third party providers (such as hotels or travel agents) are playing an increasingly important role in communicating and shaping the experience of places.

A new information system designed to be fit-for-purpose across a spectrum of applications is being developed by the Interconnect partners.

Interconnect aims to achieve a higher quality and consistency of information provision across the region, by influencing stakeholders and inspiring third parties to communicate in a more joined-up way.



Multiple modes

Interconnect will influence the delivery of all transport services, ensuring that the design language consistently communicates the values of the network and the high quality of service.

Multiple channels

Interconnect will improve communication across all channels, making the most of new digital opportunities such as social media and existing opportunities such as the use of print or on-street information.

Multiple geographies

Interconnect will develop scalable resources that communicate the region at every level, allowing information to be tailored to an individual's needs no matter where they are, or how they choose to travel.

A network of opportunities

System of parts applied to the entire network

A system of parts that works across different transport modes, communication channels and local contexts will be developed to support a seamless experience of the region.

A new data, design and production platform will underpin the development of Interconnect. The platform will provide the foundation for a myriad of projects, aimed at improving information across transport modes and local environments.

Transport infrastructure will be developed alongside the information system in order to incorporate the identity and values of the region within a single system.

Transport information will be fully integrated with pedestrian information helping people make the transition between walking and travelling.

Whether developing one information product or 100, a variety of data and design elements are required.

New information products will be compiled using common data and design elements such as content and naming, fonts, pictograms and map bases.

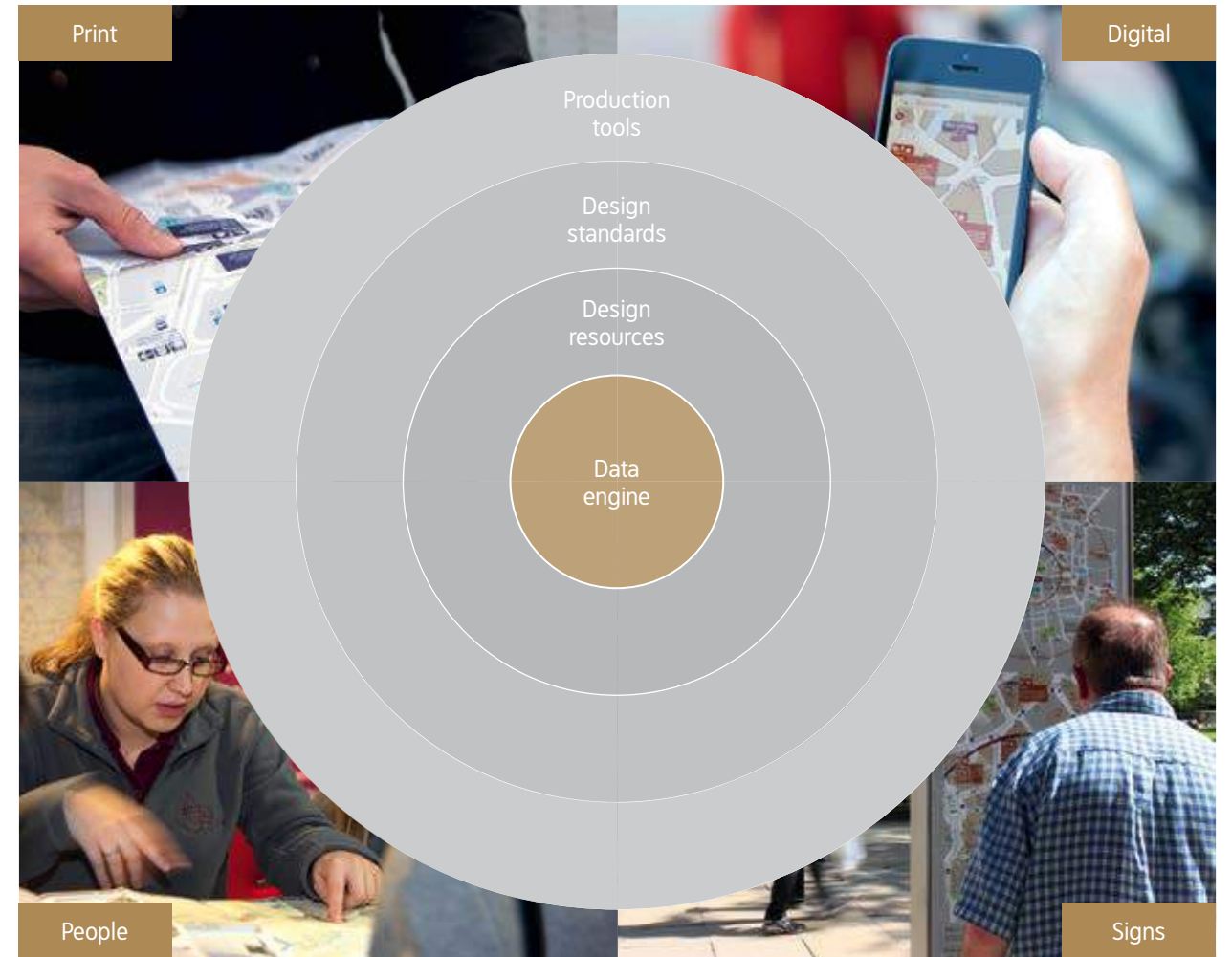
Sharing these elements will ensure a strong return on investment and will contribute towards a growing suite of resources that will increasingly be made available to regional information providers.

Royalty free

Geographic data and design resources will be developed through a royalty free process to ensure that they can be shared freely and used across a variety of platforms.

Contextualised

Some resources will be developed specifically for individual places or partners, to reflect the needs of their audience or the characteristics and context of the place.



A data engine, design resources, design standards and production tools will provide the building blocks for the development of print, digital, on-street and people based information products and services.

Significant investment and improvements to the way data is maintained and managed in the region will provide the opportunity to develop more sophisticated information products and services.

A network of opportunities

Developed and delivered in partnership

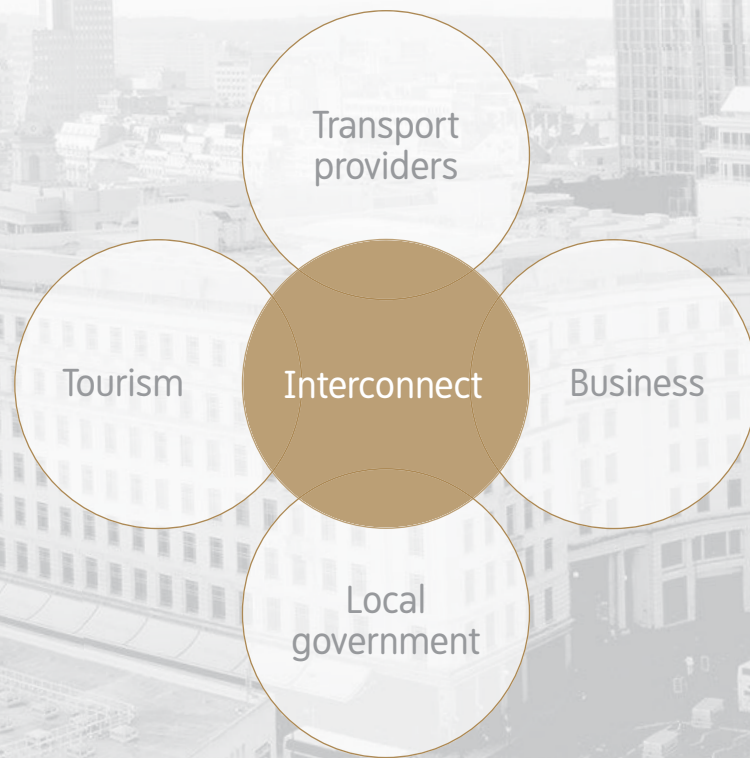
In Birmingham, Interconnect will be delivered by a partnership of organisations who serve residents, businesses and visitors.

Birmingham City Council, Marketing Birmingham, the city's Business Improvement Districts and Centro are laying the foundations for a city that is walkable, well-connected and efficient.

Working together, the partners are attracting significant investment and delivering tangible changes that are transforming the experience of the city.

By aligning workstreams and budgets through a partnership approach, the delivery partners are able to focus on generating benefits to the region in a more coordinated and effective way.

The ongoing expansion of Interconnect in Birmingham will continue to encourage partnership, knowledge transfer and smarter investment in order to meet the demands of an ever-changing region.



Delivering the vision in Birmingham



Delivering the vision in Birmingham

Birmingham's residents, businesses and visitors will benefit from a world-class city centre and public transport system.

Achieving this ambition will require significant changes to the central movement network, with Interconnect supporting major projects such as New Street Gateway, Midland Metro extension and City Centre Interchange.

Within these environments, priority is being given to transport information services, wayfinding and passenger facilities.

Delivering the vision in Birmingham

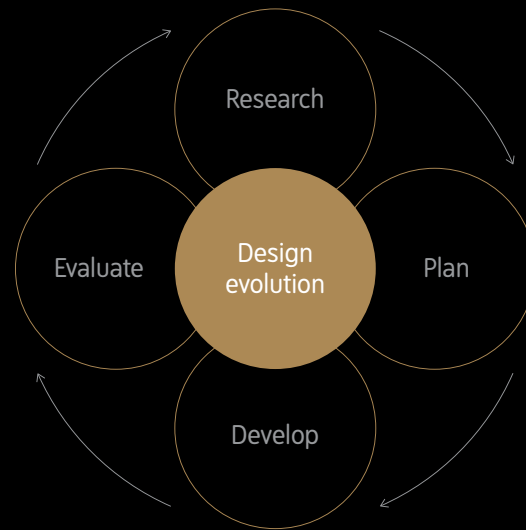
Research and planning

A rigorous design process is underpinning the development of Interconnect and helping to galvanise partnership working in the region.

The needs of all Interconnect Birmingham partners were considered at an early stage and a simple process of researching, planning, developing and evaluating has guided all projects to date.

Interconnect Birmingham partners have been pursuing a programme of work that will have a major impact on the city and the wider region. A significant number of resources have been developed and new ways of working have been realised – maximising the value of each partner’s investment and creating exciting future opportunities for all involved.

The European Regional Development Fund (ERDF) co-funded the development of the design and installation of the system.



Evolution not revolution

Birmingham City Centre provides the opportunity to evolve the existing transport identity and information design, delivering high quality products that showcase the aspirations of the movement network.

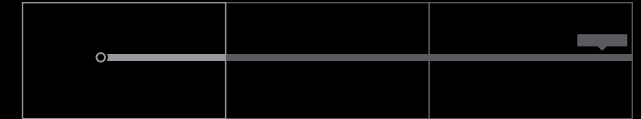
Beyond Birmingham

The regional network has been considered throughout this process and the system has been developed in a way that can be adapted and implemented in other environments.

Collaboration

This process is based on the understanding that all partners will work in a coordinated and collaborative way, to co-develop systems that meet their needs and the needs of their customers.

These pages give a brief overview of some of the working processes used to deliver Interconnect Birmingham projects.



Research

Principles

Planning



The project team conducted research activities including focus groups and surveys to understand the needs of users. Research into best practice and new technologies also informed the early stages of the project.

Project principles were identified at an early stage through facilitated workshops which have continued to shape the development of the project.

The planning of the system from content development and naming to product types and site plans started at an early stage and continued throughout the process.

Regular project meetings and presentations allowed the partners to plan and steer the project.

Delivering the vision in Birmingham

Planning for an improved journey experience

From planning transport routes and walking networks, to sign locations and bus shelter capacities, Interconnect has coordinated projects and partners to deliver an inclusive strategy for the delivery of new information products and facilities.

Strategic planning of movement networks at all levels has led to more legible and reliable services, more intuitive stop set-outs and more appropriate information.

With the extension of Midland Metro, the routing of bus services in and around Birmingham has been optimised to increase frequency along strategic corridors that serve the city centre. The transport network is now being planned to support whole journeys by improving levels of interchange with other services and transport modes.

Data has been collected and categorised using GIS (Geographic Information Systems) and is presented to visitors through mapping and diagrams. Future projects will be able to make use of this data, adding categories and managing changes efficiently.

Transport and wayfinding products have been planned and developed in collaboration with all partners, minimising the amount of infrastructure required and creating a seamless experience for people transferring between transport modes.

The specification for a kit of parts including a family of information totems and passenger shelters have been developed to meet the needs of all users across a varied network.

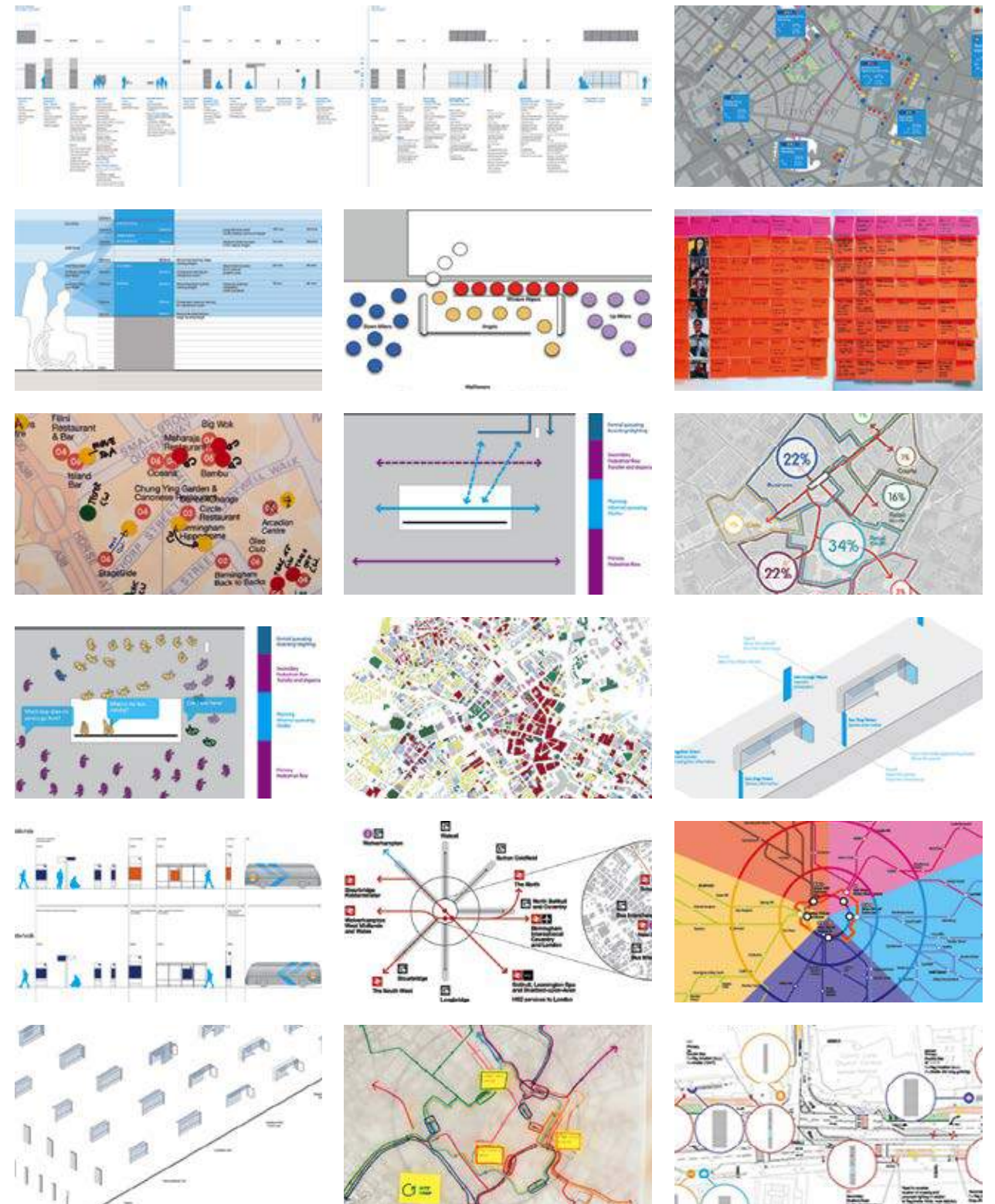
Research into user-needs and partner requirements highlighted the demand for an extendable and adaptable graphic language to incorporate richer map-based information, network diagrams, real-time information and interactive displays.

Planning rules and guidance have been developed that record the development of each project and will inform future phases.

As Interconnect begins to influence projects beyond Birmingham City Centre, the ongoing planning of the system will continue and evolve.

The project advocates a contextualised approach to implementation. Future phases will apply the system of parts appropriately, responding to the unique qualities and characteristics of place.

Research and planning into user-needs informed the design approach. The range of research activities included; ergonomic and observational analysis, market research, movement modelling, network and route planning, user testing and diagnostics.

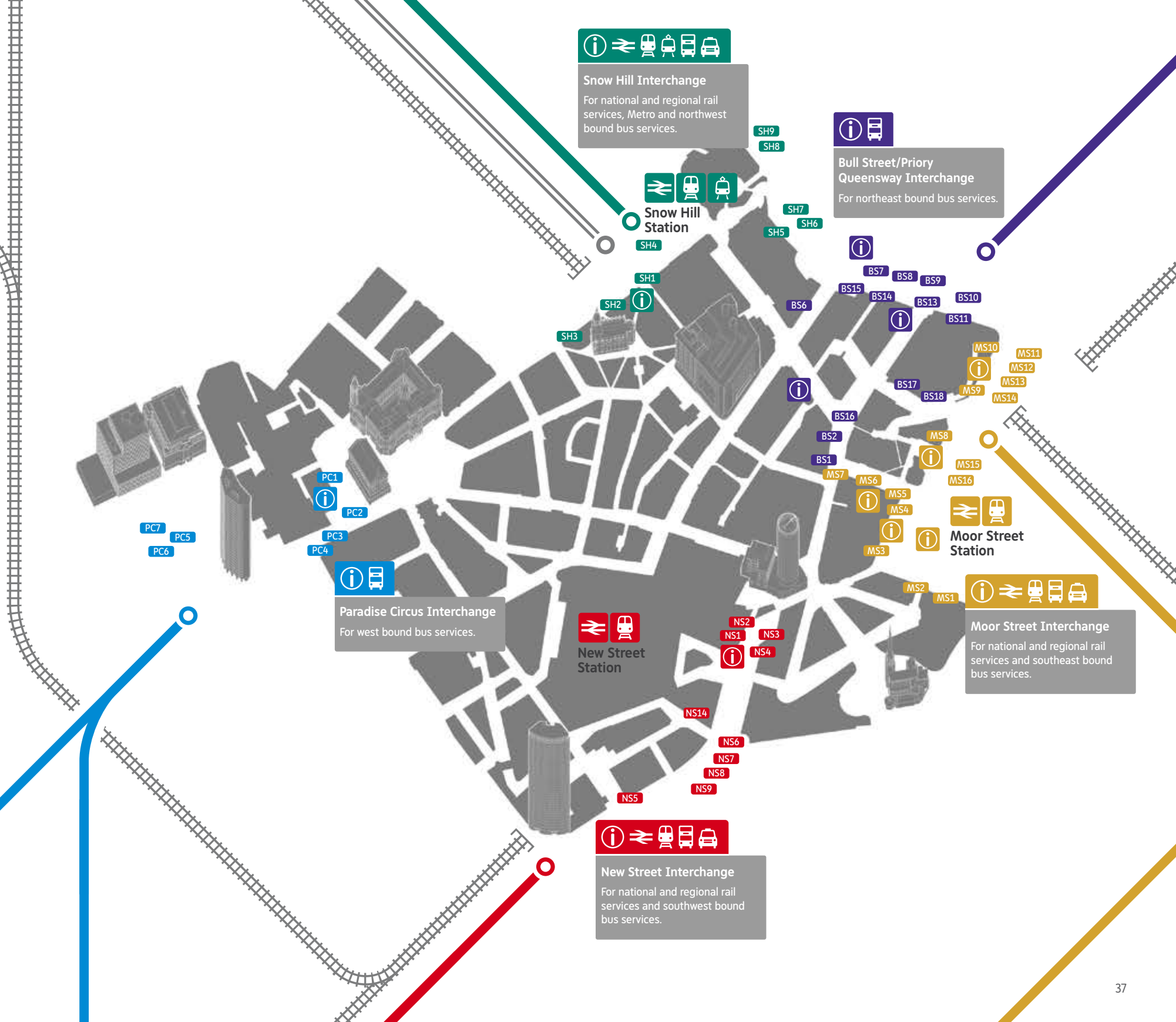


In Birmingham City Centre a more legible transport network has been planned to improve efficiency and support interchange.

All transport services in the city centre are now accessible from five transport interchanges that serve the entire West Midlands region – giving greater choice, reliability and flexibility to passengers.

This network supports major transport developments such as Birmingham Sprint Rapid Transport System and High Speed Rail 2 which are currently in development.

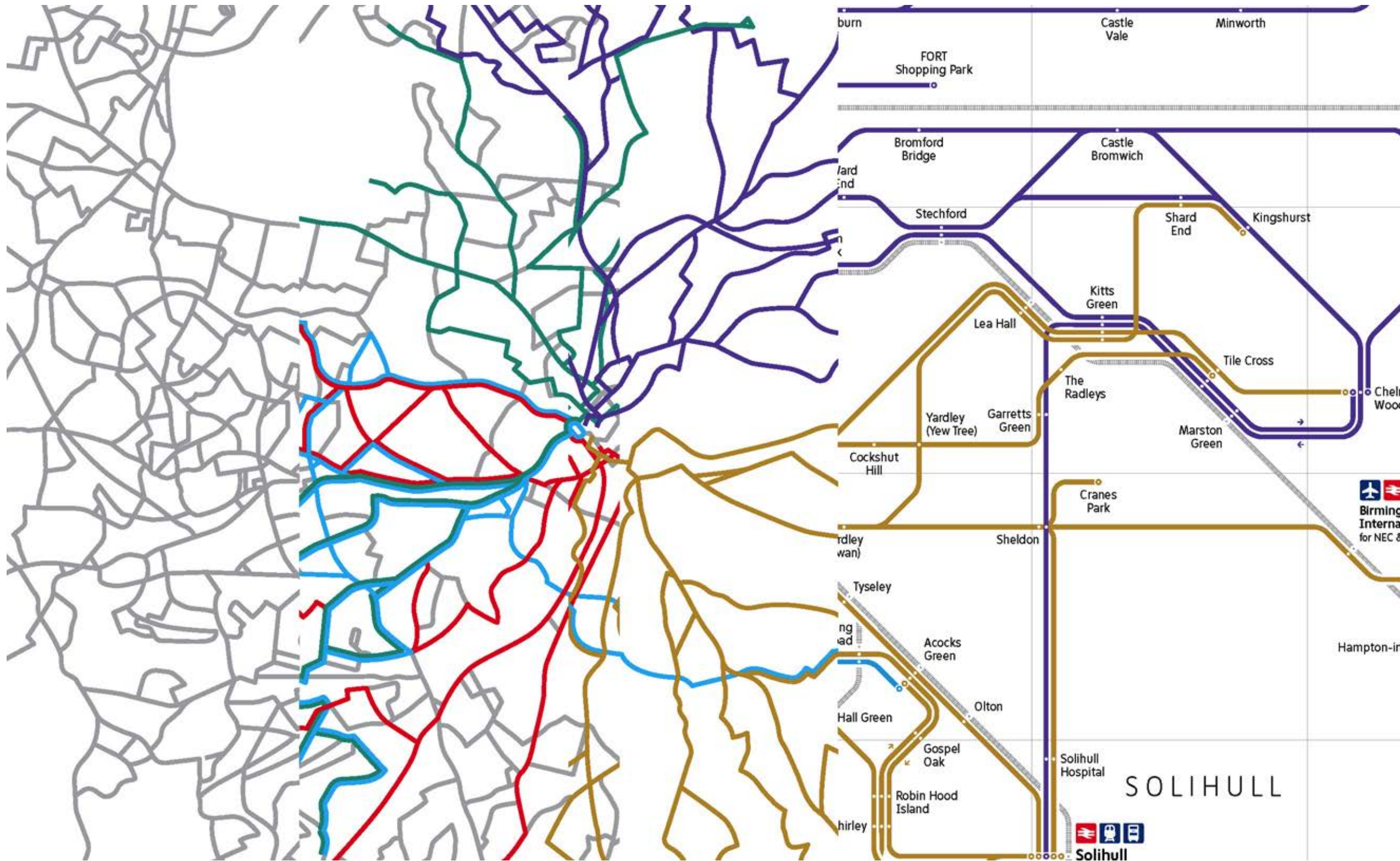
Connecting streets and spaces will become the focus of further improvements making walking the most convenient and pleasurable way of getting around the city centre and encouraging interchange.



From complex routes and diagrams, a simple and intuitive interpretation of the transport network has been designed to reveal travel options from Birmingham City Centre.

Transport lines are colour-coded to highlight services from five transport interchanges, each serving a defined part of the region.

This gives passengers a simple, immediate and memorable impression of the network that allows them to better understand and access transport services.



Delivering the vision in Birmingham

System development



System concept

System architecture

Stakeholder engagement

Design development

Resource development

User testing



Early workshops led to a common understanding of the concepts that would underpin the development of a comprehensive multi-modal information system.

The function of each information type was considered in parallel with the design of product forms, locations and journey stages. This led to a detailed specification and design brief for each product.

Partners and stakeholders were engaged frequently during the project. This allowed all involved to obtain an understanding of the role and function of each design element and provide approval where necessary.

Identity, information and product design development progressed iteratively, creating visualisations and multiple versions of each design to incorporate the changing demands of the project.

Detailed base maps were developed at different scales using cartographic styles and techniques for various information applications.

Testing and diagnostics took place at key stages during design development to test ideas with the public before design production. Detailed market research was conducted independently leading to a number of design modifications.

Delivering the vision in Birmingham

Evolving the graphic language

Shape, form, typography, icons, colour and illustrations form the basis of the graphic language. They are integral to creating a legible and recognisable information system.

Interconnect provides a new graphic language for a new generation of information products and services.

A recognisable brand identity for public transport services is of fundamental importance to achieving an interconnected transport network in the West Midlands. The Interconnect graphic language has been designed to support and work seamlessly with both new and existing transport infrastructure, enabling gradual improvements to the transport system.

Graphic elements have been developed, to ensure that they are fit for purpose across a new generation of digital information products and services.

The widespread use of the VAG Rounded typeface offered limited flexibility in use. A unique typeface for the region was commissioned that would address issues of legibility. Known as 'Network', this new typeface was developed with Monotype and is fast becoming the standard for new transport and visitor information services in the region.

New pictograms have been designed to work seamlessly with the typeface, mirroring its character form and reflecting international standards. These pictograms were tested with the public to ensure the set is intuitive, universally recognisable and suitable for different types of information. Colour sets, graphic devices and illustrations were also developed to improve the functionality and usability of information.

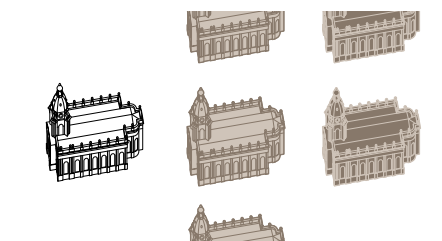
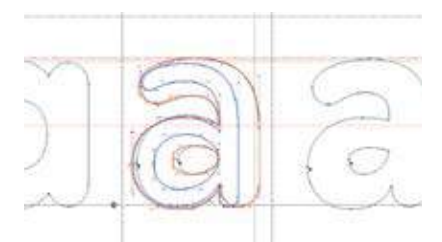
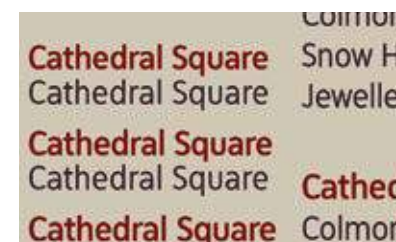
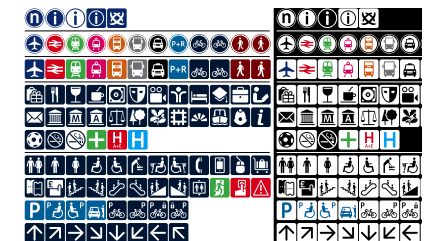
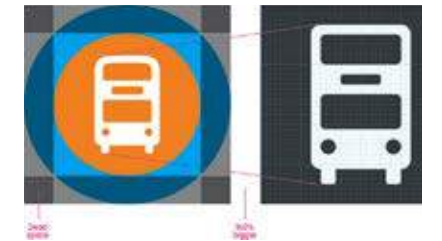
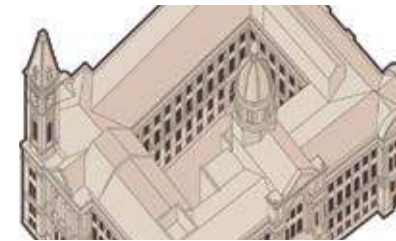
The Interconnect partnership agreed that in a diverse region, each town and city should be able to reflect its individual characteristics within the system. To address this, a strategy has been developed that promotes the use of the same graphic language where people will benefit from greater familiarity and consistency.

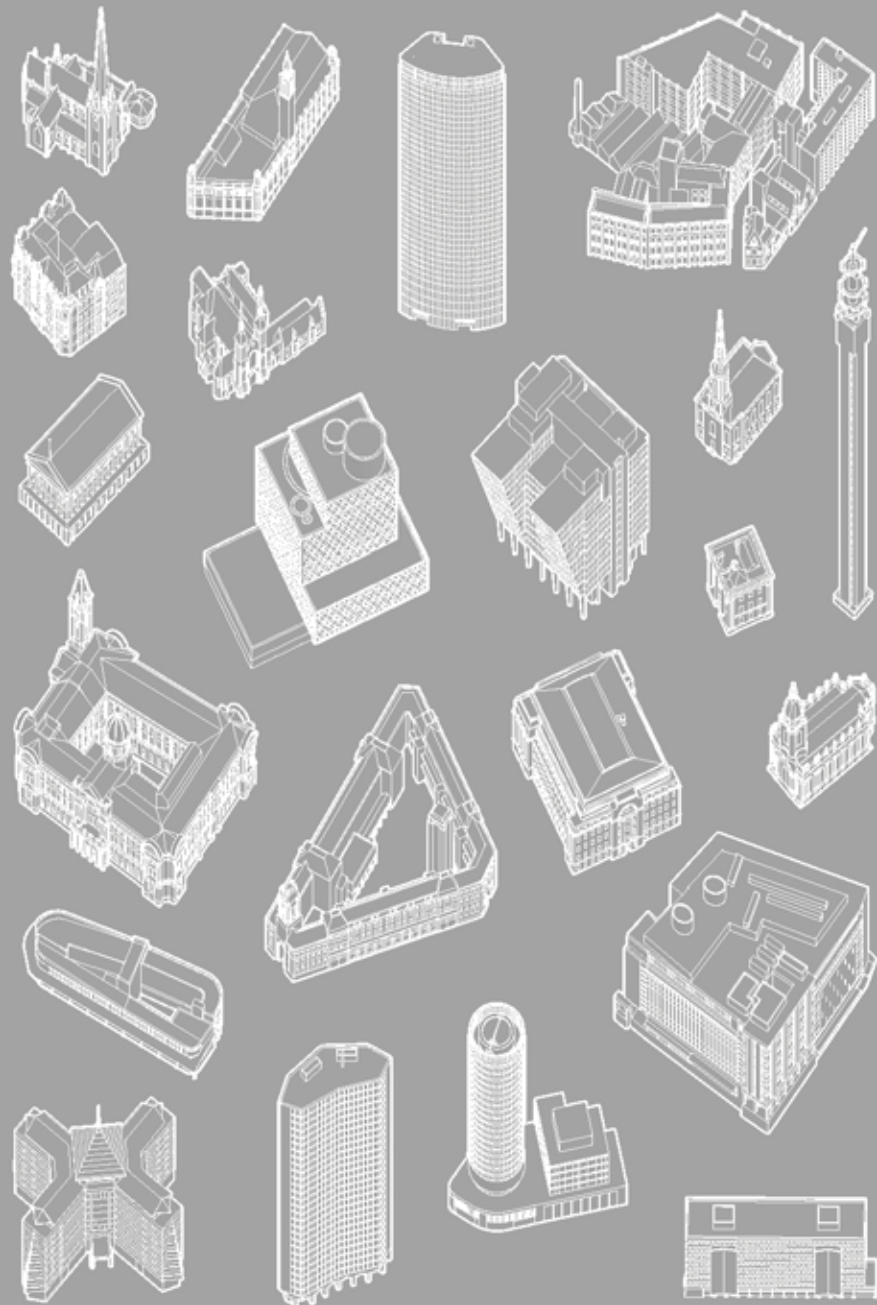
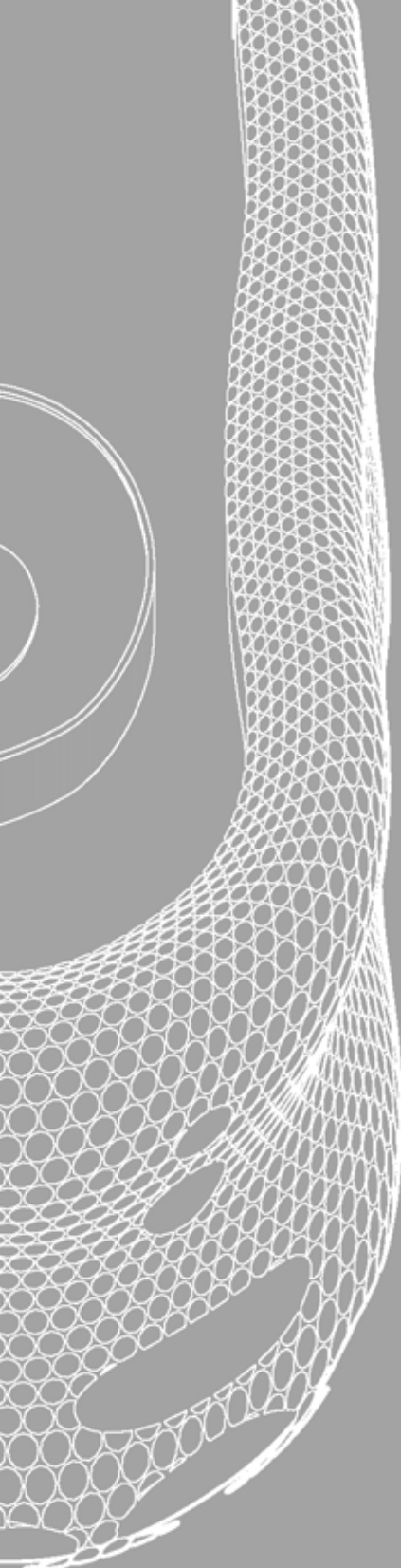
The approach allows for selected graphic elements such as colour and information content to be tailored to local requirements, whilst maintaining a clear relationship to the overall system that users will come to understand and trust.

With hundreds of factors and parameters to consider, the design team worked in an open and iterative way, testing concepts and ideas before refining the graphic language.



Network Light (72 pt)
BIRMINGHAM
Network ExtraLight
Birmingham
BIRMINGHAM





A new typeface for the West Midlands

Network Bold

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 0123456789**

Network Display

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 0123456789**

Network Regular

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 0123456789**

Network Light

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 0123456789**

Network Ultra Light

**ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz 0123456789**

Network

VAG Rounded
Network

**aefgjnrw
aefgjnrw**

To address factors such as media type, character recognition, accessibility and licensing, an appropriate and cost effective bespoke typeface was commissioned, developed in partnership with Monotype.

Five weights of Network have been designed for all design applications throughout the information system, establishing a strong visual identity and improving the consistency of the journey experience.

Pictograms were designed in parallel with the typeface as an expression of the same system and to work seamlessly together across different environments and media.



Burlington
Arcade & Hotel

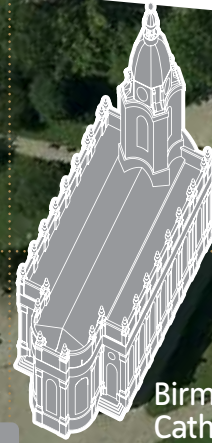
Tesco
Metro

Waterstones

Visitor
Centre

The
Studio

Premier
Inn



Birmingham
Cathedral

You are here

Cathedral Square
A pleasant green space in the heart of the city with the Grade I listed cathedral at its centre and many cafés and pubs nearby.

SH1-SH3



Snow Hill Interchange
For national and regional rail services, Metro and northwest bound bus services.

Sainsbury's

House
of Fraser

Great
Western
Arcade

Snow Hill
Station

Colmore Business
The commercial heart of the city with many listed buildings, offices, companies and a variety of restaurants and cafés.

Innovat
Court

Hotel
du Vin



Colmore Business District
 The commercial heart of the city with many listed buildings, companies and a variety of restaurants and cafes.

You are here

Cathedral Square
 A pleasant green space in the heart of the city with the Grade I listed cathedral at its centre and many cafes and pubs nearby.

Snow Hill Interchange
 For national and regional rail services, Metro and northwest bound bus services.

Snow Hill Station

Delivering the vision in Birmingham

A new product language

The design of a new family of information totems, passenger facilities and associated street furniture is based on a shared product language, that combines functional requirements and design values.

The modular design of totems and passenger facilities means that many materials and components are shared across the system.

Durability is extremely important and product designs have been developed to minimise the risk of damage and vandalism. Individual parts can be replaced and upgraded as necessary.

Shelter designs can be adapted for different environments within city centres and scaled appropriately for different situations within the network. Additional products will be required as the system grows, but the design language and values will visually link these forms as an extension of the system identity.

All information totems in Birmingham City Centre are powered, allowing for illumination and the application of real-time or interactive information.

React – a talking sign system developed by the RNIB that enables blind or partially sighted people to move around with more independence – is being tested and evaluated in some locations.

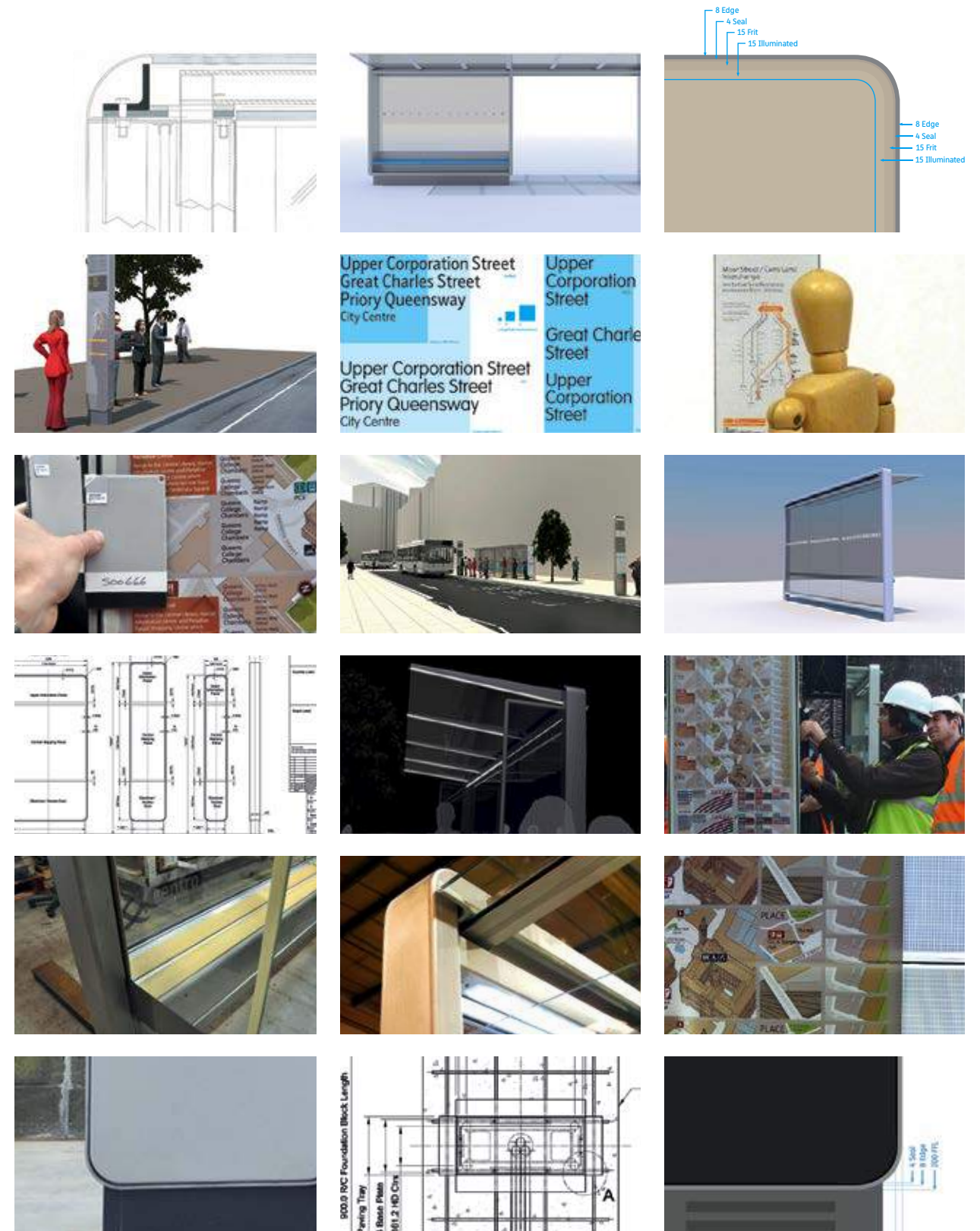
The product language is designed to be welcoming, friendly and reliable. The final forms are intended to appear 'timeless' and understated. The quality of materials, information, and installation all play a part in raising the standard of service in the region.

Graphic information is printed on high quality vinyl and back-applied to glass, which allows information to be updated easily and also illuminated for 24 hour use.

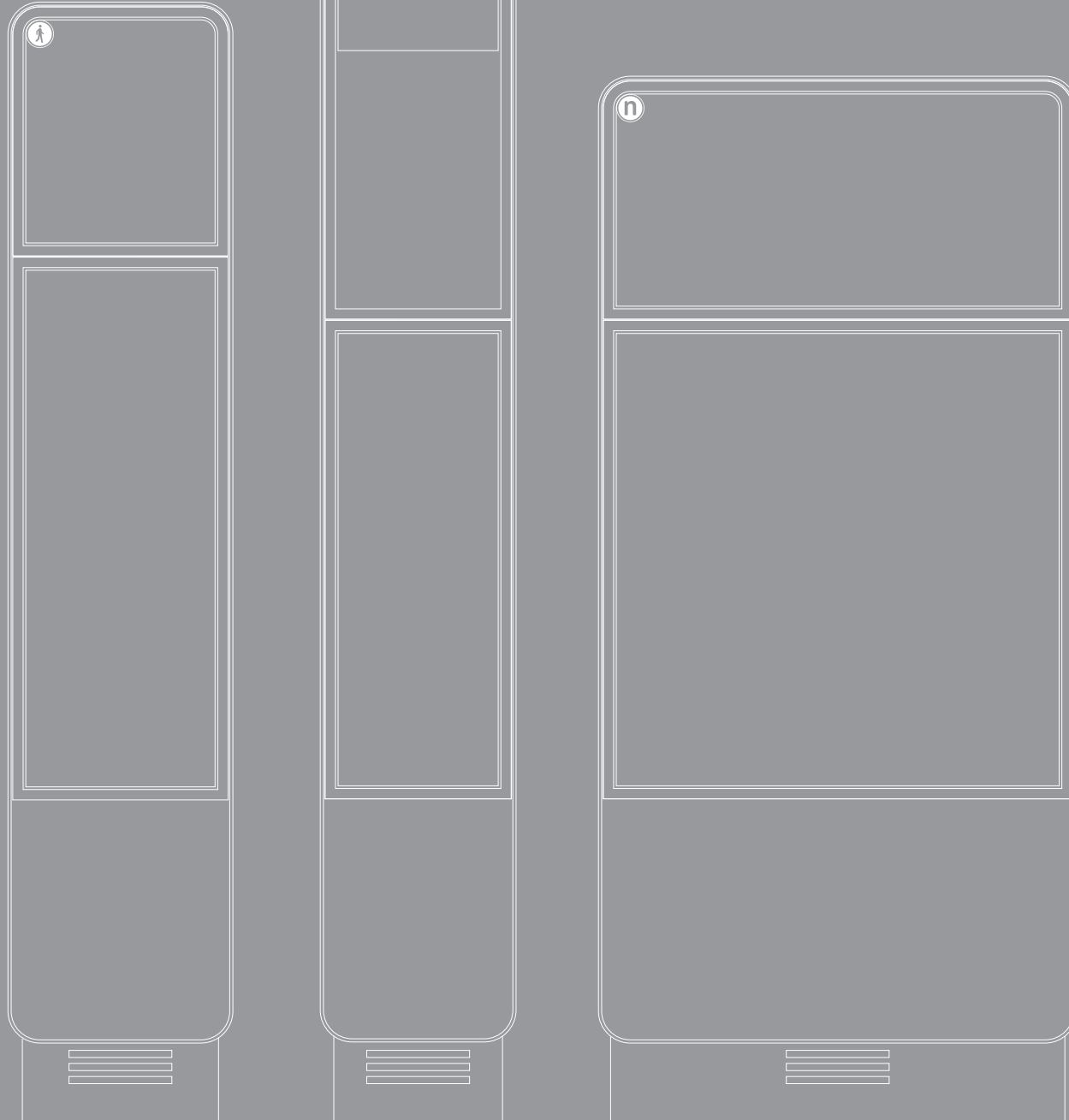
Interconnect partners understand the responsibility of ensuring that quality standards are monitored, repairs are made swiftly and information is kept up-to-date.

This work is informing the development of Midland Metro and New Street Station passenger facilities that will feature prominently in Birmingham City Centre in the near future.

The design form communicates a unifying sense of simplicity and lightness-of-touch in each product.



Information totems have been designed to incorporate printed media and a range of technologies.



Delivering the vision in Birmingham

New types of information

A wide range of information resources are required to generate new information products and services. More appropriate and accessible information is being developed to meet the needs of a growing transport network.

Information resources including maps, diagrams, indexes and timetables – each communicate a distinct type of information. Selected information resources are being applied to a new generation of products and services to meet the needs of the people who will use them.

A detailed specification for each new information type has been developed to guide the design and delivery of new information products and services within the system.

A number of map bases have been developed as part of a new data and mapping platform to reveal the city at different scales. The graphic styling of each base has been defined to support pedestrian movement and to provide more detail about the destinations and activities in a given area.

The Interconnect mapping platform will provide accurate and authoritative information to a level of quality and detail that is rarely seen in other systems.

Map bases, drawn at appropriate scales, are important resources as they can be tailored for different purposes, allowing specific information content to be overlaid as appropriate to user-needs.

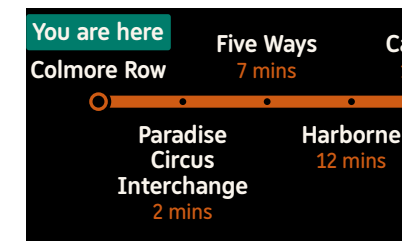
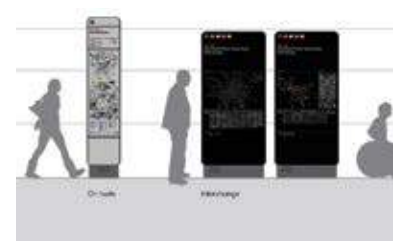
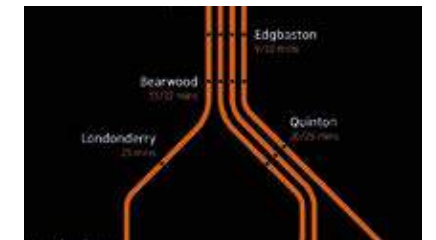
Supporting diagrams are also a recognisable part of the information system and are used to present complex information in a more understandable way, giving people a clearer picture of their transport options.

Other information resources such as indexes and service timetables are also important and work with maps and diagrams to support journey planning.

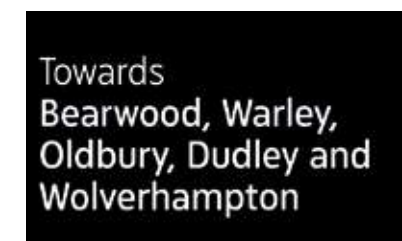
Using the emerging graphic and product language, new types of information were defined and developed for testing. Consultation with project partners and the public guided design iterations.



9 Towards Stourbridge via Halesowen		National Express West Midlands		140
Monday – Friday	Saturday	Sunday	Monday –	
12am 0040 0040	12am 0010 0040	12am 0015	10pm 223	
6am 0345 0350 0350 0351	6am 0340 0350 0350 0351	6am 0340 0350 0351 0351	11pm 233	
until 0350	until 0350 0350 0350 0351	until 0350 0350 0350 0351		
6am Every 4-10 minutes	6am 0840 0855	11am Every 20 minutes at		
until 0920 0926 0926 0921	until 0840 0855	11am 00, 20 and 40 minutes		
10am Every 7-8 minutes	10am 1802 1812 1822 1835	past the hour		
until 0922 0927	4pm 1850 1910 1920 1930			
10am 1850 1857	6pm 2000 2020 2040 2115			
10am 1920 1927	11pm 2145 2145			
10am 1950 1957	11pm 2145 2145			
10am 2000 2007				
10am 2030 2037				
10am 2100 2107				
10am 2130 2137				
10am 2200 2207				
10am 2230 2237				
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72	Solihull	900	0530	0545	0555
73	Solihull	0530	0545	0555	0605
74	Dudley	0530	0545	0555	0605
75	Wednesbury	0530	0545	0555	0605
80	West Bromwich	0530	0545	0555	0605
81	Branshall	0530	0545	0555	0605
82	Bearwood	0530	0545	0555	0605
87	Dudley	0530	0545	0555	0605
89	Oldbury	0530	0545	0555	0605
90	Chelmsley Wood	0530	0545	0555	0605
94	Chelmsley Wood	0530	0545	0555	0605
92, 97A	Chelmsley Wood	0530	0545	0555	0605
98	Rubery	0530	0545	0555	0605



Regional transport information



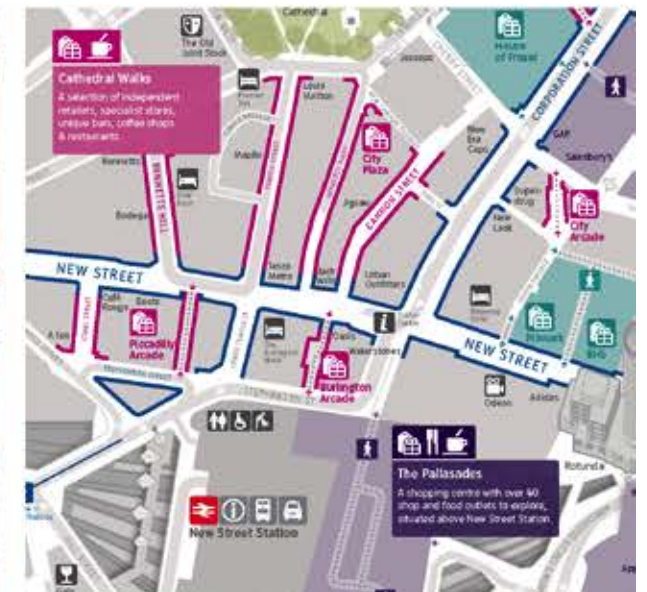
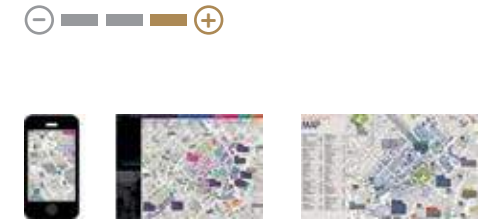
A flexible and scalable mapping platform is in development. The platform features a range of maps that share unified characteristics, but can be tailored by project partners for specific functions and applications.

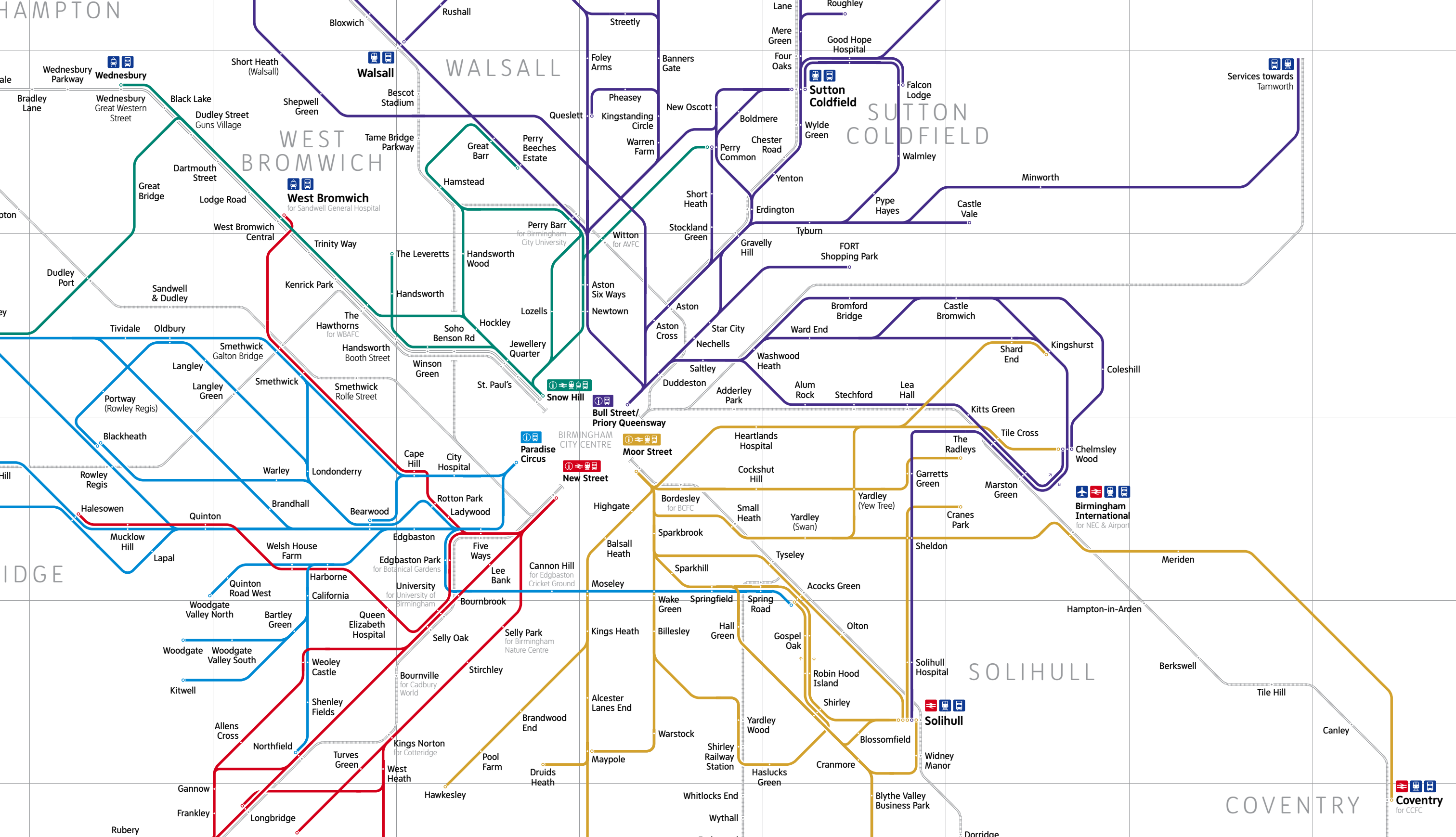


Local wayfinding



Tailored activity guides







National Express West Midlands

140 Towards Dudley via Blackheath

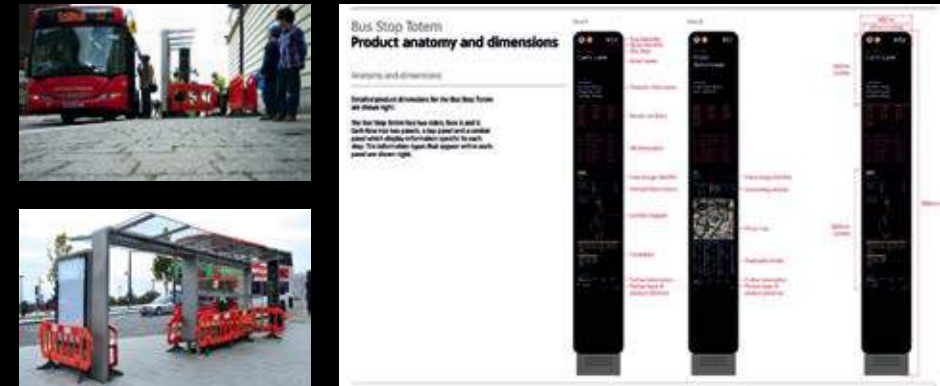
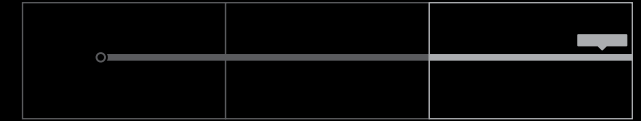
Sunday
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500 0530 0600 0630
700 0730 0800 0820
840 0855
12am 0015
7am 0720 0755 0825 0855
until 0925 0955 1020 1040
11am Every 20 minutes at

Monday – Friday
10pm 2230
11pm 2330

Saturday
10pm 2230
11pm 2330

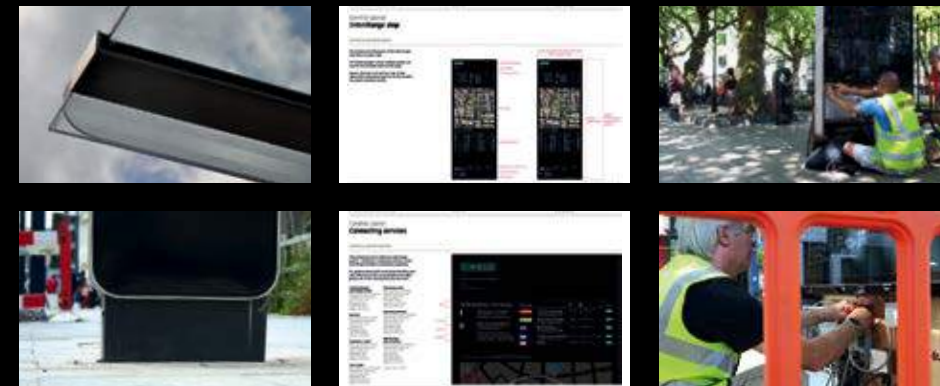
Delivering the vision in Birmingham

Delivery and evaluation



We are here

Prototyping Manufacture Design production Installation Quality assurance Management Maintenance Evaluation



Prototyping of product forms, technology components, lighting and print materials helped define manufacturing specifications and identify potential issues.

During manufacture, the performance of materials, prints and technologies were thoroughly tested.

With final designs, locations and network information approved, design production of multiple graphic artworks began.

Installation was carefully planned and phased to minimise the disruption to the general public.

On street checks and quality assurance helped to identify any potential issues with information, products and installation. Safety standards were also inspected to ensure expectations were met.

Systems have been put in place to guide the onward management of infrastructure and information. Increasingly, automated systems are reducing the time required to make updates.

A rigorous and thorough maintenance regime is in place to ensure vandalism, malfunctions, wear and tear are repaired immediately.

The delivery of new bus stop infrastructure, transport information, pedestrian wayfinding and associated print products provide an opportunity to test the new system and evaluation will take place to inform future phases.

Delivering the vision in Birmingham

New products and services

Interconnect is delivering one of the most comprehensive on-street transport and wayfinding information systems of its kind anywhere in the world, setting a new benchmark for other towns and cities.

A comprehensive network of Interconnect pedestrian signs has been installed at strategically selected locations to encourage movement and on-street activity. Information is designed to make walking journeys around the city centre easier and make public transport more accessible. This will contribute towards carbon reduction and help to stimulate economic investment.

At transport interchanges, Interconnect has delivered new on-street products that feature intuitive network diagrams and service information. At all city centre bus stops, Interconnect has delivered improved passenger facilities and information products that feature route diagrams, onward journey maps and real-time departure information.

As part of this major upgrade to transport interchanges, complementary public realm and highway works have been completed to rebalance streets and spaces for all users and improve access to public transport.

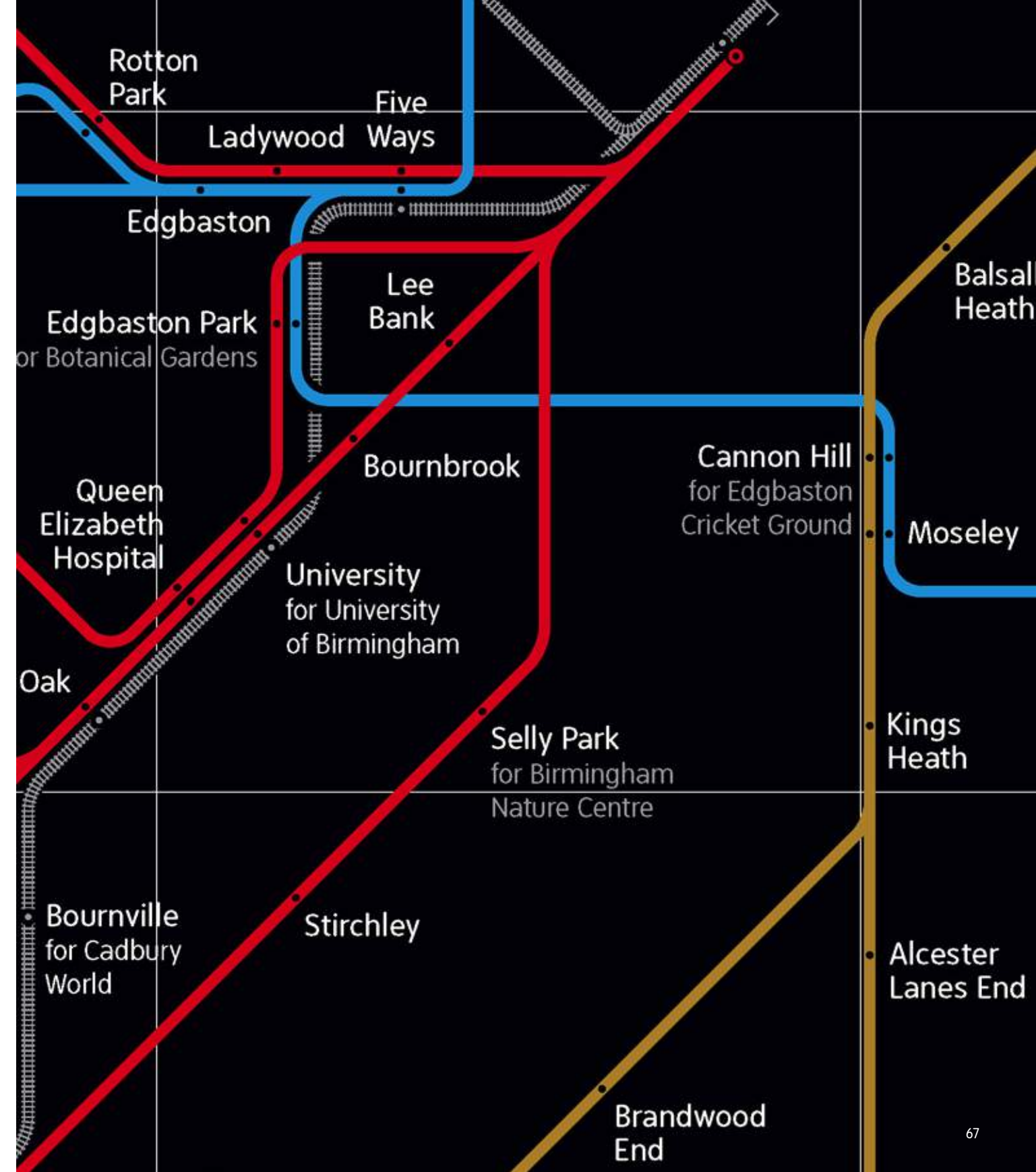
Meanwhile, improved buses with lower emissions and better on-board environments are greatly improving the experience of travel in the area.

These tangible improvements are now making a difference to the lives of people who pass through the city centre daily – but this is just the beginning of the Interconnect project.

Interconnect partners are now using design resources to develop printed and digital information products that feature accurate and consistent pedestrian and public transport information. Detailed design standards and production guidance have been delivered to support the ongoing management and expansion of the information system.

Supported by the Interconnect project, long-term planning to improve the quality and distinctiveness of the city's streets and public spaces is underway. In time, a comprehensive upgrade to the public realm and street furniture will help to improve the visitor experience, enhance perceptions, and improve the reputation of the city.

As the system is extended across the city and region, a process of review and evaluation will continue to identify strengths and weaknesses, ensuring the system evolves and grows in a way that meets the needs of all users.





SH2
Bus Stop
Colmore Row

Towards
Bearwood, Quinton
and Halesowen

3 83 89
140 141 829

Bus	Destination	Time
7	Shedfield	23:00
53	Shedfield	23:00
3	Shedfield	23:00
140	Bullay	23:00
3	Shedfield	23:00

23:05

SHEDFIELD

23:05

23:10

23:15

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25:00







A connected future





A connected future

Interconnect partners continue to shape an ambitious vision for change across the region. From building the skill base of employees, to investing in new products and services, the organisations involved are providing commitment and strong leadership.

The partnership provides a platform for a host of innovative projects that will deliver major improvements to the journey experience in the coming years.

A connected future

Multiple applications

The experience, knowledge and working practices of Interconnect partners, provides a strong foundation for investment in future phases of the project.

Interconnect is building an extendable and scalable kit of parts that will be used to improve information and passenger facilities at all bus stops, Metro stops, stations and transport interchanges, as well as improving the visitor experience of the region's cities, towns and local centres.

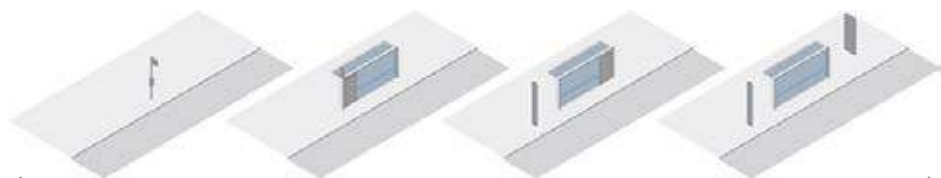
Interconnect partners are poised to build on recent success and to seize new opportunities for greater connectivity across the region.

In order to maximise the benefits of this vision, a partnership group – the Interconnect Knowledge Network – will be established to open a dialogue with all information providers.

As more design resources are developed, there will be a greater ability to meet the demand for high quality and cost-effective products and services.

The Interconnect partners have identified that recent advances in technology provide some of the greatest opportunities to improve the journey experience and work is underway to define how new digital products and services will be developed.

A growing ambition for changes in the way the region's transport and visitor information is delivered is emerging – a vision for a connected future that links people in real-time to places, movement networks and social networks via new and existing products and services.



← Regional or local centres
Low level of interchange

→ City or town centres
High level of interchange

A connected future

Interconnect Knowledge Network



The Interconnect Knowledge Network will include all regional information providers who share a common goal to improve people's understanding and experience of the West Midlands.

The intention is that all projects developed as part of the Interconnect Knowledge Network will encourage management and leadership skills, design capability and knowledge sharing in order to drive innovation, ensure legacy and deliver quality.

A connected future

A responsive, real-time information system

A responsive information system receives data from a variety of sources continuously and responds directly to users' needs through innovative products and services.

In future, as the family of information products and services develops to work across digital platforms, travel information will correspond more closely with the specific and complex attributes of a user's journey.

Interconnect will become the interface between people and places, guiding and informing the user at every stage of their journey, providing up-to-date and relevant information on-demand.

As 'smarter cities' collate and manage dynamic data, a wide range of 'smarter' products and services can be developed to display information in real-time or to automatically generate and output information in printed formats.

Mobile technology provides the most significant opportunity as people increasingly rely on and want to receive information on-the-go.

A responsive, real-time information system will receive, collate and process data from a variety of sources, including the user and respond instantly.

The potential of social networking is only just beginning to be realised and the implications for information providers are complex. However, this vision recognises the significance of this opportunity and seeks to build on recent successes by embedding social network functionality within digital products and services.

User interaction

With the user's permission, information services will capture data about their preferences, location and orientation in order to provide more accurate and appropriate information.

Information services

Those who choose to interact with information services will be relieved of the burden to interpret discrete types of information and will instead receive context-appropriate and on-demand information direct to their digital devices.

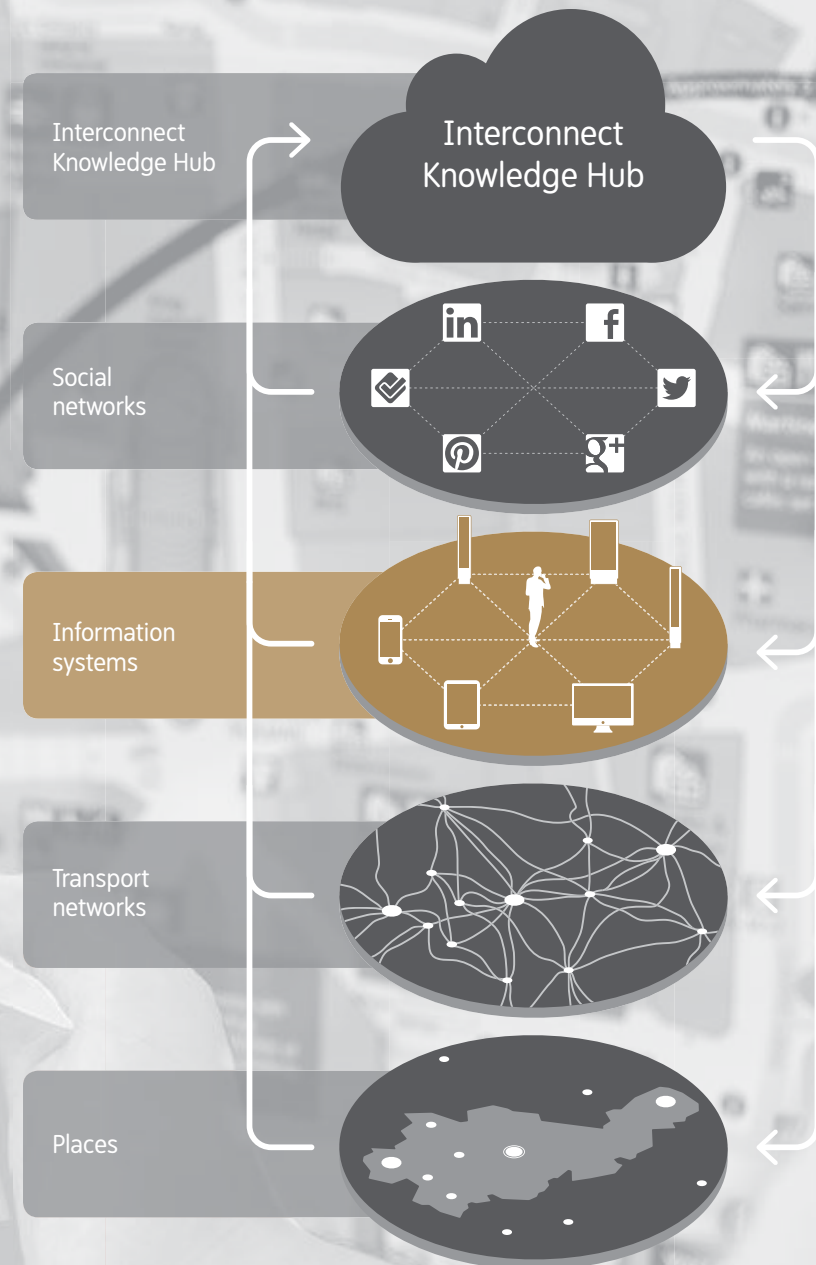
Data exchange

A subscribed user will in effect be 'connected' as they passively 'transmit' data en-route. In addition, the user will be able to actively input more data about their preferences, interests and/or journeys to get increasingly more personalised information.

The more information can reflect real world situations, the greater the benefits to users making day-to-day decisions about where to go or how to get there.

The Interconnect Knowledge Hub will become a publicly accessible database and operating system for the region. It will receive data in real-time from places, transport networks, information systems and social networks. Data will then be collated and interpreted so that appropriate information is made available in response.

For places and transport networks this means that public services and transport services can respond more efficiently to the needs of people and passengers.



A connected future

Interactive information products

Interconnect Knowledge Hub

The ambition is that the Interconnect Knowledge Hub will deliver context appropriate, on-demand digital information services to people in the West Midlands using the design language and resources developed as part of the first phase.

Static information such as on-street totems and active information such as RTI displays will remain the backbone of the system, providing 24 hour inclusive access to all.

As technology allows users to actively engage with information on-the-go, transport and visitor information will move towards providing information that is contextualised to the person, place and purpose – their reason for travelling.

Key features of interactive information products are illustrated to demonstrate some of the possibilities that will be explored as part of the Interconnect Knowledge Hub.



City interface

From the planning stage of a journey onwards, a new interface will be available for all users on all platforms. The interface will provide options to input a user's journey plans and monitor their progress so that it can help them on their journey.

The following inputs will trigger responsive information outputs:

1. Who is travelling?
Their abilities, preferences, interests and needs
2. Why are they travelling?
Their purpose or activities
3. Where are they travelling to and from? Their origin, location and destination

Real-time map suite

_Interactive map suite, allowing users to navigate between map scales and content layers
_Activity finder – allowing users to search activities such as shopping, days out, music, or events
_Tailored content based on users' preferences, location and time

My journey

_Journey planner – showing all journey options and times
_Best route now – allowing quick journey options from a user's location to their home, work or place of interest
_Location updates, alerting users to events, news and places of interest nearby

Service guide

_Interactive 'live' network maps and diagrams
_Service and modal updates in real-time, alerting users to possible changes to services across the network

Web integration

_Integration with online map providers to make more consistent and detailed information available through contextualised 'place layers' that reflect the Interconnect system identity
_Integration with social media channels allowing status updates within the city interface



Interactivity

On-street information totems also provide opportunity for greater levels of interactivity. Existing totems are powered and can be fitted with Near Field Communication devices.

Graphical User Interface (GUI)

A graphical user interface for the Interconnect system will be developed that has a standardised design language between mobile devices, on-street information totems and passenger facilities.

Responsive interfaces

Gesture based interactivity provides new opportunities for more responsive on-street displays. Mobile devices will be used to trigger options on large scale displays, augmenting additional content based on preferences.



Over time it is envisaged that the Interconnect Knowledge Hub and a system of associated information products and services will become known as a best practice example for other regions seeking to harness the potential of the 'smarter city' and improve the journey experience.

As the West Midlands takes on the challenges ahead and seeks to compete with other major regions both nationally and internationally, Interconnect is well placed to play an important part in the region's development and future success.

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_Halcrow/CH2M HILL
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_Ocula 3D Design Studio
_Peter Brett Associates
_RSL
_Trueform

Interconnect Birmingham project partners

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_Centro
_Colmore Business District
_Jewellery Quarter Business Improvement District
_Marketing Birmingham
_Retail Birmingham
_Southside Business District

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_Birmingham Civic Society
_Birmingham Development Company
_Birmingham Shopmobility
_Brindleyplace
_Broad Street BID
_Bullring
_Canal and River Trust
_Digital Birmingham
_Eastside developers forum
_Jewellery Quarter Regeneration Partnership
_Millennium Point
_Museum of the Jewellery Quarter
_National Express
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The European Regional Development Fund (ERDF) 'Investing in the city region' co-funded the development of on-street design and installation of totems, integrating public transport, pedestrian and cycling wayfinding information to improve visitor and resident experience of the city.

Fundamental to the development of this book has been Centro and its partners' involvement in the INVOLVE Export Visits and Workshops.

Good practices in Mobility Management, shared by the INVOLVE European project partners, have both informed and inspired Interconnect's vision to enable, share, tailor and promote integrated transport and visitor information within the region.

The INVOLVE project is co-financed by the European Regional Development Fund and made possible by the INTERREG IV C Programme.

investing
in your future
European Regional Development Fund
European Union



INVOLVE

NODES



Interconnect marks a turning point in the way the West Midlands responds to the needs of its residents and visitors. It sets a new benchmark for other places around the world that are aiming to improve the journey experience.

This publication has been produced by Centro and City ID with the support of Interconnect partners.