

**A Cardiff Capital Region Metro:  
Strategic Implementation Plan - update**

# **A CARDIFF CAPITAL REGION METRO**

## ***Update Report***

August 2014



## **A Cardiff Capital Region Metro:**

*Connecting more people to more places*

*Enabling development & regeneration*

*Delivering a sustainable, economically dynamic city region*

# A Cardiff Capital Region Metro: Strategic Implementation Plan - update

## 1 EXECUTIVE SUMMARY

In October 2013, The Metro Impact Study<sup>1</sup> presented a vision of a dynamic, connected, and liveable city region. By delivering a once in a generation Metro Programme, the study identified that the Cardiff Capital Region could secure significant economic benefits and provide the basis for greater social equality and sustainable economic development. The study estimated that, with an investment of £2bn, the region could benefit from 7,000 more jobs and a further £8bn into its economy. The Metro would also be symbolic of the transformation of the Cardiff Capital Region enabling it to raise its international profile and compete more effectively on the world stage.

Following its publication, the Minister for Economy, Science and Transport commissioned further work, building on the Impact Study, to identify next steps in making the Metro a reality. At the same time delivery is underway on the ground with £77m being invested in transport improvements across the region under Metro Phase 1.

The work over the last nine months has focused on examining the feasibility of the interventions set out in the Impact Study (Figure 1) and the affordability of both potential new and existing public transport operations. This work has been predicated on the baseline assumption that Valley Lines electrification will be in place.

This update report presents a summary of the work to date, based upon the analysis produced in the 2013 Impact Study, expert assessment and a synthesis of the further detailed work that has been undertaken.

The output is a clear articulation of the Metro vision focussed on enhanced mobility, greater accessibility to jobs and services and economic development. It also identifies a number of strategic Metro projects that justify further detailed analysis and testing against alternative options.

The Cardiff Capital City Region Board will now take ownership of the strategic vision for the Metro and consider it as part of the development of the broader approach to economic development in the region. At the same time, detailed work will continue on progressing specific elements of the Metro Programme and this will be fully integrated with the Welsh Government's National Transport Plan. In partnership with the Cardiff Capital Region Board, The Welsh Government will further consider the optimal governance arrangements for the development and delivery of The Metro.

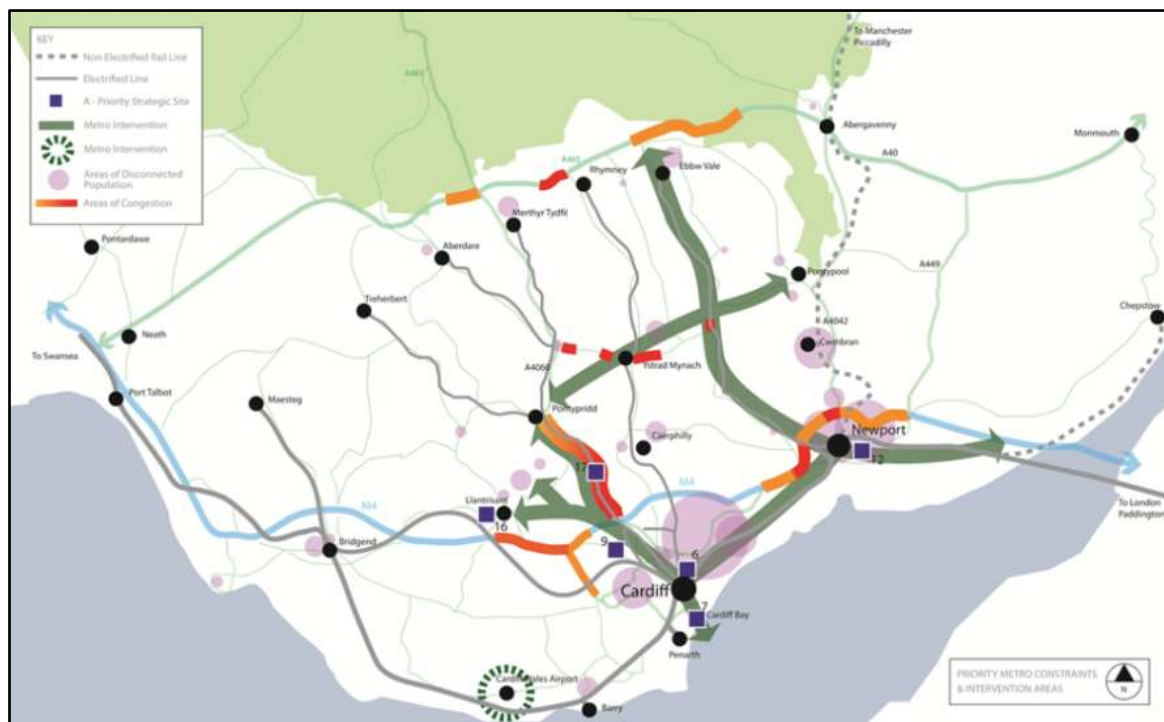


Figure 1 Metro Priority Interventions from 2013 Metro Impact Study

<sup>1</sup> Welsh Government/Metro Consortium, 2013, A Cardiff Capital Region Metro: Impact Study (<http://wales.gov.uk/topics/transport/integrated/metro/?lang=en>)

# DRAFT - A Cardiff Capital Region Metro: Update report

---

## 1.1 Why?

The Cardiff Capital Region has a solid base of transport connectivity which includes a radial rail network, a legacy of the south Wales Valleys' coal mining past, but greater integration of transport modes and services, frequency and quality enhancements have the potential to transform the region's economic potential.

One of the key findings from the Eddington Report<sup>2</sup> was that 'there is clear evidence that a comprehensive and high-performing transport system is an important enabler of sustained economic prosperity.' The report showed that 'transport networks support the productivity and success of urban areas and their catchments, by getting people to work, supporting deep and productive labour markets and allowing businesses within the area to reap the benefits of agglomeration.' Delivering enhanced connectivity which enables improved urban mobility and accessibility is the prize that the Metro aims to deliver for the Cardiff Capital Region.

We have also drawn on the example provided by exemplar European public transport systems in places like Stuttgart, Copenhagen and Nantes and the economic potential that they have helped to unlock.

## 1.2 The Metro Vision

The Cardiff Capital Region Metro vision is for a multi-modal rapid transit network integrating all transport modes, offering the passenger a single ticket, "turn up and go" experience.

It will enable modal shift that will contribute to improved air quality and a reductions in greenhouse gas emissions.

With an aspiration of at least four services per hour at the network periphery, increasing to six over time and more frequent services at the core, Metro will deliver a network where interchange is straightforward using vehicles that are designed for speed and capacity and where stations provide better passenger facilities and become a focal point for their communities.

For the passenger, the actual mode will melt into the background as the integrated, reliable and frequent services allow people to move easily across the region. This transformation in sustainable urban mobility and increased accessibility will have a profound impact, not just in terms of its social, economic and environmental effects, but also in helping shape the region's wider identity.

Aligned to a core transport programme, the Metro presents an opportunity for developers and Local Authorities to adopt a "transit oriented development" approach; directing development and regeneration to Metro transport corridors and its key stations and interchanges.

Aligned to proposals to address issues on the road network including the M4 Corridor around Newport and the dualling of the Heads of the Valleys, the Metro will be designed to help the Cardiff Capital Region look forward with confidence and ambition.

## 1.3 The Metro Programme

Building on the strategic focus and recommendations of the 2013 Metro Impact Study and the delivery already underway through the Metro Phase 1 investment, this report starts to identify components that could make up a Metro delivery programme. These components fall into four main groupings:

- integration and identity

---

<sup>2</sup> The Eddington Transport Study 2006 -

[http://www.google.co.uk/url?url=http://webarchive.nationalarchives.gov.uk/20090104005813/http://www.dft.gov.uk/about/strategy/transportstrategy/eddingtontstudy/&rct=j&frm=1&q=&esrc=s&sa=U&ei=CZS7U6qRDKWK0AWokIHQDA&ved=0CCUQFjAC&usq=AFQjCNFdmday0N\\_aPII6jXfT7rTdLYRYw](http://www.google.co.uk/url?url=http://webarchive.nationalarchives.gov.uk/20090104005813/http://www.dft.gov.uk/about/strategy/transportstrategy/eddingtontstudy/&rct=j&frm=1&q=&esrc=s&sa=U&ei=CZS7U6qRDKWK0AWokIHQDA&ved=0CCUQFjAC&usq=AFQjCNFdmday0N_aPII6jXfT7rTdLYRYw)

# DRAFT - A Cardiff Capital Region Metro: Update report

---

- infrastructure interventions
- underpinning steps
- development and regeneration

The *integration and identity* interventions focus on making the Cardiff Capital Region Metro brand a reality by bringing together timetables, ticketing and information for existing services and creating a cohesive Metro service identity.

There are already a number of planned *infrastructure interventions*, including the UK Government's investment in electrification which will contribute to the development of the Metro. In addition, we have identified a number of emerging infrastructure interventions. These are at the earliest stage of development and require further testing against other options before confirming those interventions that should move into scheme and business case development.

The *underpinning steps* reflect the tools, resources and capabilities that have been identified as necessary, or which require further investigation, in order to deliver the Cardiff Capital Region Metro successfully.

The Metro also provides the opportunity to unlock *development and regeneration* opportunities associated with improved transport connectivity.

## 1.3.1 Integration and identity

### ***Immediate actions***

Ease of travel through integrating modes, timetables and ticketing is a key feature of effective public transport systems, providing a seamless joined up experience for passengers. This is challenging in an environment where a number of different providers are in direct competition with one and other to provide services.

An obvious early win would be for multi-modal, integrated smart ticketing to be available across the Cardiff Capital Region and for the timetabling of rail and bus services to be complementary rather than disjointed.

To progress this, it is proposed that Welsh Government will work with industry partners across the region, with an early focus on development and implementation of smart ticketing and, building on the recommendations of the Bus Policy Advisory Group, review local bus networks to encourage greater use of the public transport network as a whole. That work will consider the potential role that Statutory Bus Quality Partnerships, the specification for next Wales and Borders franchise and public sector service funding might play in driving integration and passenger demand.

It is also proposed that the Welsh Government will work with partners in local government, the rail and bus industry and wider business community to develop truly multi-modal transport interchanges, which include provision for active travel, at key locations. Cardiff Central Station, at the heart of the Central Cardiff Enterprise Zone, will be an early priority. Similarly Newport is a priority with Metro Phase 1 investment to complete work on the bus station and install a pedestrian bridge over the railway at the station to improve the interchange. Further locations will be identified and developed.

Good quality, accurate information about routes and timetables, accessible through a range of tools and apps will be important in encouraging passengers to use Metro services. These can be developed to support a unified Metro brand. The Cardiff Capital City Region is currently undertaking work on the City Region brand and the Metro identity will be developed as a subsidiary to this main brand by the City Region Board.

Welsh Government will work with Traveline Cymru and industry partners to develop integrated information tools and resources.

### ***Emerging proposals***

It is recognised that there may be a limit to the integration that can be achieved through voluntary joint working and by using franchising, procurement or quality partnership processes.

# DRAFT - A Cardiff Capital Region Metro: Update report

---

There are limitations to the Welsh Government's current powers in relation to bus and rail services but we are seeking additional powers in both these areas and our proposals were reflected in the recommendations of the Silk Commission. With this in mind, Welsh Government will give further consideration to how additional powers, if conferred, might be used to enable integrated service provision.

Welsh Government will also work with Cardiff and Newport Councils to explore the future role of Newport and Cardiff bus companies.

## **1.3.2 Infrastructure interventions**

### **Current or planned interventions**

Valley Lines electrification and electrification of the Great Western Mainline to Swansea form the key underpinning for the Metro programme. These UK Government projects will deliver operational efficiencies and journey time benefits for rail users and the new rolling stock will enhance the passenger experience significantly.

Through the Cardiff Area Signalling and Renewal programme (CASR) Network Rail is investing £200m in upgrading signalling and infrastructure to deliver capacity and reliability improvements across the rail network.

The Welsh Government is investing £77m in a package of Metro Phase 1 infrastructure improvements. This will deliver an extension of the rail line to Ebbw Vale town and a new station; capacity enhancements on the Maesteg line; a new station at Pye Corner; rail and bus station improvements across the region; bus priority schemes focused on the A470 corridor from north Cardiff to Rhondda Cynon Taff; and active travel and park and ride schemes.

### **Emerging proposals**

In preparing this report, we considered a wide range of infrastructure options for further phases of Metro roll-out and looked at proposals that would represent radical change. Given the cost and delivery challenges of these options, we identified a smaller number of possible interventions to examine in more depth, enabling the larger propositions to be tested on a smaller scale. We will continue to examine the case for more radical options while delivering improvements that make a real difference on the ground now.

It is important to be absolutely clear that these possible interventions are not preferred solutions. They have not yet been comprehensively tested against other possible options to deliver the desired outcome. The next step would be to complete that option appraisal work, which would provide a list of preferred interventions that could be tested further through the development of a business case.

The possible interventions that have been identified so far include:

- potential enhancements to remove operational constraints and so enable more frequent services on the rail network. This could include re-doubling of track in certain locations and an additional rail bridge span over Newport Road
- potential development of new stations
- potential role of Bus Rapid Transit (BRT) in Cardiff and Newport
- potential use of the relief lines for the Great Western Mainline between Cardiff and Severn tunnel junctions for additional services, served by new stations and park and ride provision
- potential development of light rail, with an initial pilot focused on the route between Cardiff Queen Street to Cardiff Bay and, building on previous work undertaken in the Metro Impact Study, possible options linked to development in north west Cardiff and other routes

The more detailed investigation of a variety of possible Metro interventions will enable us to set out the technical and financial issues involved in implementing these options and possible social and environmental impacts. Based on the work already undertaken, to complete the transport planning process and to develop the business case for interventions we need to:

# DRAFT - A Cardiff Capital Region Metro: Update report

---

- set out the transport challenges facing the Cardiff Capital Region over the next thirty years which can be reflected in the National Transport Plan
- Through stakeholder engagement, confirm the objectives for the transport network in the Region and a long list of ways in which they could be achieved
- Set out an appraisal of these options, highlighting the way in which they would contribute to meeting the Region's transport and wider objectives, identifying the scale and location of their social, environmental and economic impacts, indicative costs and any issues associated with delivery
- Review the options and confirm which interventions or combinations of interventions should be taken forward for more detailed design, technical and financial feasibility review and impact assessment work

In relation to the initial proposals that have been identified, the Welsh Government proposes the following specific steps:

- the identified enhancements to remove operational constraints will be tested further with Network Rail and rail operators and, if they appear feasible and deliver the anticipated benefits, will be subject to business case development
- we will adopt a strategic approach to identifying and assessing the case for new rail stations as part of the National Transport Plan, Metro proposals will be developed in this context
- we will review in more detail and confirm the major corridors for the movement of people in the future and assess which modes are most appropriate to cater for them. This will include more detailed consideration of Bus Rapid Transit (BRT), Light Rail (LR) and Heavy Rail (HR) services)
- Network Rail's Long Term planning process is currently underway and will produce an updated strategy for the railways into and within Wales, setting out investment priorities through to 2043. Network Rail are already looking very closely at capacity along the Great Western Mainline from the Severn Tunnel and the possible future role of the current relief lines. We will work with Network Rail to examine the scope for additional services and stations along this section of track
- The initial focus on light rail will be on the link between Cardiff Queen Street and the Bay. We will progress design work on the route alignment, new stops and interchanges at Cardiff Central and Queen Street
- Where the patterns of future demand suggest passenger numbers are sufficient to support light rail services, we will further investigate their technical feasibility and business case. Key stakeholders, including Network Rail, will be engaged as required to assist in developing these proposals.

# DRAFT - A Cardiff Capital Region Metro: Update report



Figure 2 Urban Mobility and Trams in Nantes

### 1.3.3 Underpinning steps

We have already identified that certain tools, resources and capabilities will be necessary, or the case for them requires further investigation, in order to deliver the Cardiff Capital Region Metro successfully.

The need for a single brand, linked to the City Region brand, and a coherent approach to information provision is noted earlier in this report.

A further requirement is the need for a regional transport model. This tool will provide a deeper understanding of current travel patterns in the region across all modes and future performance levels on the network as new developments are built. The proposed design of the regional transport model is based on European best practice and focused on ensuring that the model contains up-to-date information on current trips and well-researched evidence on the changes in trip-making made in response to changes in the transport infrastructure. The model can be used to inform scheme design and provide sufficiently detailed information to support the development of Metro up to and including a full business case. Such an investment will provide a transport planning resource for both Welsh Government and the Cardiff Capital Region.

The Welsh Government will consider further the case for investing in a regional transport model and the data requirements and operational arrangements necessary to support it.

A report by KPMG in 2010, entitled 'Success and failure in urban transport infrastructure projects'<sup>3</sup> highlighted the importance of there being clear political control and sponsorship for project success. Experience from other parts of the UK and more widely internationally highlights that a range of governance models can work but clarity of ownership and authority to act is critical.

The Welsh Government, in consultation with the Cardiff Capital Region Board, will give further consideration to the arrangements that would be appropriate to enable Metro to be delivered.

### 1.2.4 Development and Regeneration

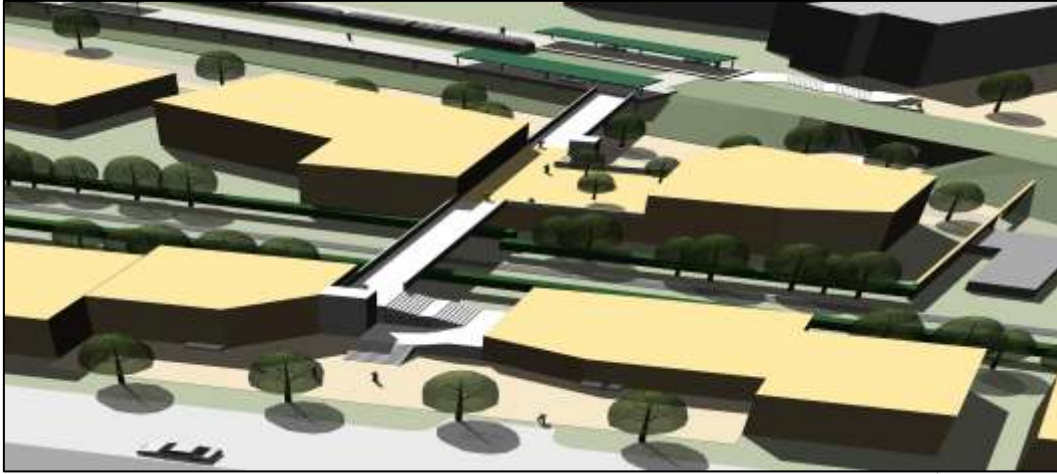
As set out in the Metro Impact Study, there would be benefits in developing the Metro aligned to strategic economic sites.

Work is also underway to explore further development and regeneration opportunities facilitated by Metro – both small scale and strategic. Some of these will be progressed in partnership with other

<sup>3</sup> <http://www.kpmg.com/SG/en/IssuesAndInsights/ArticlesPublications/Documents/infra-Success-and-failure-in-urban-transport-infrastructure-projects-transport.pdf&rct=i&frm=1&q=&esrc=s&sa=U&ei=0Sq9U5D8CeWV7AbyzYD4DQ&ved=0CCMQFjAA&usq=AFOjCNHBkEhIw2Y7YtGHD2Ew4ApDTA6ehA>

# DRAFT - A Cardiff Capital Region Metro: Update report

stakeholders. These will provide examples for transit oriented development that can be replicated across the region as market conditions allow.



*Figure 3 Example of potential stations based development at Ely Mill*



*Figure 4 Illustration of proposed Ebbw Vale Town Station*

## 1.4 The Programme, Costs and Benefits

A key focus of the next stage of work will be to develop realistic assessments of the cost and benefits of possible interventions and to test these through business case development. Nevertheless it is already clear that the Metro, as envisaged, would be a very substantial capital programme.

Welsh Government will work to refine the cost / benefit analysis of specific interventions and the programme as a whole and, through the Cardiff Capital Region Board, will work to develop a plausible financing strategy.

### **Ongoing implementation**

Action 1 - Delivery of Metro Phase 1 projects including:



# DRAFT - A Cardiff Capital Region Metro: Update report

---

- an extension of the rail line to Ebbw Vale town and a new station
- capacity enhancements on the Maesteg line
- a new station at Pye Corner
- rail and bus station improvements across the region
- bus priority schemes focused on the A470 corridor from north Cardiff to Rhondda Cynon Taff
- active travel schemes
- park and ride schemes

## **Next six - nine months**

Action 2 - in consultation with the Cardiff Capital Region Board, we will give further consideration to the arrangements that would be appropriate to enable Metro to be appraised, developed, and delivered and whether any new governance arrangements are required to enable this

Action 3 - the Cardiff Capital Region Board will take ownership of the strategic vision for the Metro and consider it as part of the development of the broader approach to economic development in the region

Action 4 - the Cardiff Capital Region Board will develop a Metro identity as a subset of the City Region brand

Action 5 – With the Cardiff Capital Region Board, we will continue to work on progressing specific elements of the Metro Programme and, linked to action 2 above, we anticipate that the balance of responsibility for developing and delivering proposals will evolve over time and we will retain flexibility to enable this to happen

Action 6 - we will consider the case for investing in a regional transport model and the data requirements

Action 7 - we will work with industry partners across the region to develop and implement smart ticketing

Action 8 - we will work with industry partners across the region to review local bus networks to increase commercial patronage building on the recommendations of the Bus Policy Advisory Group

Action 9 - we will work with Traveline Cymru and industry partners to develop integrated information tools and resources

## **For implementation from 2015/16 onwards**

Action 10 - we will give further consideration to how additional powers in relation to transport, if conferred, might be used to enable integrated service provision

Action 11 - we will work with Cardiff and Newport Councils to explore the future role of Newport and Cardiff bus companies

Action 12 - we will work to refine the cost / benefit analysis of specific interventions and the programme as a whole and, through the City Region Board, will work to develop a plausible financing strategy

Action 13 – The Cardiff Capital Region Board will be asked to explore further how the development and regeneration opportunities facilitated by Metro can be embedded in a regional strategy.

# DRAFT - A Cardiff Capital Region Metro: Update report

---

