Executive Summary

Measure description and implementation process

This measure involves the introduction of a multi modal ticketing system – that is the ability for passengers to travel seamlessly by bus, rail etc. with the purchase of 1 ticket to cover their entire journey irrespective of changes in transport type. Users will ultimately be able to load a bus and a train product onto their card and be able to travel where they want, when they want on Brighton & Hove Bus and Coach Company buses and Southern Railway trains[1], in line with the products purchased. Brighton & Hove Bus and Coach Company are the lead partner in this initiative; a fleet of 280 buses is operated on an intensive network which operates 24 hours a day, 7 days a week, throughout the city and to neighbouring towns in East and West Sussex.

The implementation process was severely delayed at many stages of the measure (further details in section D2). Ticketing machines were installed on buses early in 2011, testing commencing in June 2011, with a publicity campaign following over summer 2011, and initial public trials of the system began in September 2011. The system was gradually introduced, starting with only students in September 2011, and then a full roll-out to all took place from April 2012.

Due to severe delays to the implementation process, evaluation did not commence until May 2012. Brighton & Hove Bus and Coach Company are responsible for monitoring and evaluating the measure, focussing primarily on social awareness and acceptance of the scheme, and an analysis of patronage data.

- Patronage of Brighton & Hove Buses has increased by over 5.5 million over the past 6 years, up to the point of implementation of this measure;
- Continued fare paying passenger growth of approx. 4.64% year on year for the 12 months ending 30 June 2012 (already superseding figures given in C2.3, which shows that the smartcard is already having a positive effect);
- Smartcard journeys by commercial passengers increased from around 800 per day in early September 2011 to approximately 35,000 journeys per day by September 2012.

Lessons learned
- A considerable amount of work has been undertaken, and which was more challenging than originally conceived, involving numerous external suppliers and changes in working methods across the organisation. This has involved close project management at all stages of the roll-out.

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[1] Other buses and trains operate in the Brighton & Hove region, but Brighton & Hove Buses comprehensively cover all areas of the city. Trains other than Southern operate from Brighton Train Station, however Southern form a large degree of the market.

A   Introduction

A1   Objectives and Target Groups

A1.1   Objectives

The measure objectives are:

High level / longer term:

- Increase/maintain the use of PT by the introduction of a multi–modal ticket system, covering the entire network.

Strategic level:

- To make public transport use easier and therefore more attractive.

Measure level:

- Brighton & Hove Bus and Coach Company are working with the local rail company to introduce multi- modal ticketing that enables users of public transport to purchase 1 ticket that fulfils their journey requirement irrespective of (public) vehicle type.

A1.2   Target groups

Target groups are principally at City–level. For present users this will give the benefit of an integrated journey so making their trip easier. For potential users the attraction of one-ticket journeys will prove an inducement.

A2   Description

This measure involves the introduction of a multi modal ticketing system – that is the ability for passengers to travel seamlessly by bus, rail etc. with the purchase of 1 ticket to cover their entire journey irrespective of changes in transport type. The success of the Oystercard system in London has shown what a huge demand there is for an integrated smartcard, and that it also encourages increased ridership of public transport, giving significant environmental benefits as people desert their cars. Users will ultimately be able to load a bus and a train product onto their card and be able to travel where they want, when they want on Brighton & Hove Bus and Coach Company buses and Southern Railway trains[2], in line with the products purchased. No more queuing at ticket offices or paying bus drivers, thus improving journey times. Card readers on buses and at train station barriers read and accept the cards to permit a journey to take place. Southern Railway have been very actively involved in the latter months of the project to make this work, as it is a franchise commitment to the UK government, although in economic terms it is not at the moment regarded as a

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[2] Other buses and trains operate in the Brighton & Hove region, but Brighton & Hove Buses comprehensively cover all areas of the city. Trains other than Southern operate from Brighton Train Station, however Southern form a large degree of the market.

major source of revenue from Southern Railway as revenue and profits can be capped by the UK government.

A3   Person in charge for evaluation of this measure

Name of person	Pat Stringer (Project Manager), Sarah Jay (Local Evaluation Co-ordinator)
Name of organisation	Brighton and Hove Bus & Coach Company/ Brighton & Hove City Council
Direct telephone	01273 291028
e-mail	pat.stringer@buses.co.uk
	sarah.jay@brighton-hove.gov.uk

B   Measure implementation

B1   Innovative aspects

The innovative aspects of the measure are:

- **Innovative aspect 1** – Use of new technology/ITS – the introduction of travel smart cards.
- **Innovative aspect 2** – Targeting specific user groups – specifically public transport users, but with potential to attract current non users.
- **Innovative aspect 3** – New organisational arrangements or relationships – Brighton & Hove Bus & Coach Company working in conjunction with the local rail company (and car clubs from autumn 2012).

B2   Planning of Research and Technology Development Tasks

N/A – this was done separately by the bus and train company's parent company.

B3   Situation before CIVITAS

Previously, customers travelling by different modes had to buy a ticket at each leg of their journey. In the UK, generally, commercial operation of transport has in many places lead to a fragmented market with short term planning to the detriment of the customer. This project addresses this in Brighton & Hove by applying the very latest in technology to improve user experience and encourage growth in patronage to benefit the environment.

B4   Actual implementation of the measure

The measure was implemented in the following stages:

Stage 1: Purchase of ticket machines – (August - November 2010)

Purchase of ticket machines to go on the buses took place between August and November 2010. A ticket machine is shown in Figure 1.

Figure 1: Ticket Machines

Stage 2: Introduction of machines to buses (March 2011)

Introduction of the ticket machines to vehicles took place in March 2011; it required whole new 'back office' support software, electrical work taking place on the vehicles, and a comprehensive programme to train 850 bus drivers in using the machines.

Stage 3: Staff testing of the system and 'coming soon' advice to the public (April-August 2011)

Over 3,000 smartcards were printed between April and June 2011 for staff, and testing of the system therefore began in June 2011 when the smart 'chips' were delivered and installed in the ticket machines to enable them to read the smartcards. Naturally this testing, combined with the introduction of the new ticket machines, generated much public interest, and so communication (in the form of a question and answer session) was put out on the website (see Appendix A).

In addition to new ticket machines, we installed smartcard readers on board buses. Brighton & Hove Buses staff tested the system with their own passes to ensure that both the hardware and software performed as we expected it to. From 1 August, those customers with national concessionary passes started to fully use their passes as smartcards (although automatic tickets were issued first before a software fix in September 2011 rectified this).

From autumn 2011, our "SAVER" ticket range was gradually rolled out on to smartcard too, although this was a gradual process into spring 2012. We also planned an integrated ticket option with Southern Trains towards the end of 2012, and we also at possibilities with Pay As You Go too. We keep our website www.buses.co.uk fully up to date with all the latest developments as they happen.

Stage 4: Roll-out to students and campaign to inform public –
<div align="center">(August 2011 to April 2012)</div>

The introduction of smart tickets commenced in August 2011, when a publicity campaign in conjunction with Brighton & Hove City Council also started, notably through leaflet drops. There is also information about the campaign on the Brighton & Hove Bus and Coach Company website. An ever increasing number of buses also have prominent marketing to strongly promote the smartcard, as shown in Figure 2.

<div align="center">Figure 2: Communication campaign regarding the smartcard</div>

A selection of the information available on the website is included in Appendix B.

The schedule for introduction of the measure is as follows:

- Fitted with smart 'chips' early June 2011

- Acceptance of staff cards to test the system commenced late June 2011

- Acceptance of concessionary cards from July 2011

- Concessionary journeys became paper-free in September 2011

- New smart card "The Key" available from Saturday 24th September 2011

- Student cards first to be issued

- Roll out of all products complete in April 2012

- Children able to swap their existing Bus ID card from Spring 2012 for a Bus ID Key

- Promotional events – 1 day free travel to try out the scheme

- Trialling integrated tickets with local train operator Southern, August 2012

Stage 5: Monitoring – (September 2011 onwards)

Once the first smart cards were in use with students, monitoring of the measure commenced (further details in section C1), with input from drivers, customers (through regular feedback by phone, email and in person) and administration staff.

A public survey was due to be bundled with other CIVITAS measures, to test awareness and acceptance of the smart cards. Due to a delay in the smart cards being publically available, the surveying was no longer bundled with other CIVITAS measures, and has been undertaken independently by Brighton & Hove Bus and Coach Company. Brighton & Hove Buses are also currently conducting a user survey, using contact information from users, obtained when they register for the smart card.

Stage 6: Full Roll-out amongst bus passengers and testing of rail elements - (April 2012 to August 2012)

The introduction to students proved an invaluable experience for the system, for drivers, customers and administration. With all the experience gained, the bus system was launched fully to all customers in April 2012, and was exceptionally popular from the start (for week ending 14 April 2012, there were 53,718 journeys undertaken by smartcard, whilst 2 weeks later, there were 95,968 journeys undertaken by smartcard). Southern Trains began a limited test along the Brighton to Seaford line during this time (using Ticket Vending Machines, card readers on stations and within barriers), which proved successful for the intended role out in the Brighton area. The area used for the full system integrated with rail is shown in Figure 3.

Figure 3: Multi-modal smartcard ticketing area

Stage 7: Evaluation amongst bus passengers - (May 2012 onwards)

Evaluation of the system and user feedback has been severely delayed, and was only from May 2012 being conducted. Additional time was left before evaluation to allow users the opportunity to frequent the system and iron out any unfamiliarity's before obtaining solid feedback. Not all the aspects can be fully evaluated yet (this needs to be done over a longer period of time) but some very useful feedback has already been generated and this is given in more detail elsewhere in the report.

Stage 8: Full roll-out of integrated card - (August 2012 onwards)

This commenced in August 2012, whereby a 1 week train ticket and a 1 week bus ticket can be loaded on to a smartcard and used seamlessly and simultaneously by customers, and is now available to passengers.

Stage 9: Evaluation of full integrated system – (August 2012 onwards)

Evaluation of the integrated system has now commenced in conjunction with the train company, evaluating how the initial small number of cards are working through analysing card use; further evaluation will be undertaken in due course.

B5 Inter-relationships with other measures

The measure is related to other measures as follows:

Measure No. 32 Travel Plans
Encouraging people to use public transport for both school & commuter journeys

Measure No. 31 Personalised Travel Plans
Offering a range of individualised, tailored information and incentives to encourage travel behaviour change.

Measure No. 71 Personalised Travel Information Website
Information about the availability of seamless travel will be carried on the website.

- All three associated measures encourage the use of public transport and therefore potentially influence the number of users on the bus and train services. Using bus patronage projections and the expected impact of the above measures helped to realise the Business as Usual scenario.

C   Planning of Impact evaluation

C1   Measurement Methodology

C1.1   Impacts and Indicators

C1.1.0   Scope of Impact

An integrated ticketing scheme, which covers bus and rail, is seen as a major stepping stone in providing scope for future development of a public transport network, instead of a set of routes. The development of new integrated public transport schemes across the area is seen as offering strong alternatives to the private car but public awareness & understanding will be essential.

The indicators relate to:

Economy – Economic costs and benefits have been recorded and evaluated against the social and transport-related benefits of increased accessibility and modal shift. These indicators have been monitored over time to assess the long-term financial viability of the scheme.

Society – Awareness and acceptance surveys have been used to monitor the take-up of the service and to assess the impact it is having upon the public. This also helped to identify any barriers to take-up such as special accessibility, economic accessibility, and perception of security. A change to a well-used service such as the buses must be closely monitored.

Transport – In addition to the social indicators of acceptance and awareness, the quality of the new service must be observed. Indicators including accuracy of time keeping and perception of quality of service, as well as modal split and take-up rate have all been monitored in order to assess the 'real' acceptance of the service, and how it performs in relation to the traditional service.

C1.1.1 Selection of indicators

NO.	EVALUATION CATEGORY	EVALUATION SUB-CATEGORY	IMPACT	INDICATOR	DESCRIPTION	DATA /UNITS
	ECONOMY					
1		**Benefits**	Operating Revenues	Operating revenues	Revenues per pkm	Euros/pkm, quantitative, derived or measurement
	SOCIETY					
13		**Acceptance**	Awareness	Awareness level	Awareness of the policies/measures	Index (%), qualitative, collected, survey
14			Acceptance	Acceptance level	Attitude survey of current acceptance of the measure	Index (%), qualitative, collected, survey
15		**Accessibility**	Spatial Accessibility	Perception of accessibility	Perception of physical accessibility of service	Index(%), qualitative, collected, survey
	TRANSPORT					
18		**Quality of Service**	Service reliability	Accuracy of timekeeping	Number and percentage of services arriving / departing on time	No and %, quantitative, collected, measurement
19			Quality of service	Quality of service	Perception of quality of service	Index, qualitative, collected, survey

C1.1.2 Methods for evaluation of indicators

No.	INDICATOR	TARGET VALUE	Source of data and methods	Frequency of Data Collection
1	Operating revenues	Accounts	Brighton & Hove Bus Company	Annual
13	Awareness level	Public awareness	Users are targeted via online survey when buying their smartcards online on the bus company's website. It is intended for the bus company, in conjunction with the Council, to do a Non-users survey when resources allow by post, and which can be sent to every nth address from the Councils Land & Property Gazetteer database to target residential population of the city (approx 114,000 households). Target size of the sample would be 5000+ to achieve 1000 responses (confidence interval +/- 3.0). The online survey for non-users would go on the Council's website.	Ongoing Annual
14	Acceptance level	Public awareness	Users are targeted via online survey when buying their smartcards online on the bus company's website. It is intended for the bus company, in conjunction with the Council, to do a Non-users survey when resources allow by post, and which can be sent to every nth address from the Councils Land & Property Gazetteer database to target residential population of the city (approx 114,000 households). Target size of the sample would be 5000+ to achieve 1000 responses (confidence interval +/- 3.0). The online survey for non-users would go on the Council's website.	Ongoing Annual
15	Perception of accessibility	Public awareness	Users are targeted via online survey when buying their smartcards online on the bus company's website.	Ongoing

No.	INDICATOR	TARGET VALUE	Source of data and methods	Frequency of Data Collection
			It is intended for the bus company, in conjunction with the Council, to do a Non-users survey when resources allow by post, and which can be sent to every nth address from the Councils Land & Property Gazetteer database to target residential population of the city (approx 114,000 households). Target size of the sample would be 5000+ to achieve 1000 responses (confidence interval +/- 3.0). The online survey for non-users would go on the Council's website.	Annual
18	Accuracy of timekeeping	Services arriving/departing on time	Accuracy of timekeeping is measured quantitatively via data collected by the Brighton & Hove Bus Company.	Ongoing Annual
19	Quality of service	public awareness	Users are targeted via online survey when buying their smartcards online on the bus company's website. It is intended for the bus company, in conjunction with the Council, to do a Non-users survey when resources allow by post, and which can be sent to every nth address from the Councils Land & Property Gazetteer database to target residential population of the city (approx 114,000 households). Target size of the sample would be 5000+ to achieve 1000 responses (confidence interval +/- 3.0). The online survey for non-users would go on the Council's website.	Ongoing Annual

C1.1.3   Planning of before and after data collection

EVALUATION TASK	INDICATORS INVOLVED	COMPLETED BY (DATE)	RESPONSIBLE ORGANISATION AND PERSON
Financial Monitoring	1	M30	Pat Stringer, B&HBCC
Users Survey	13 – 19	M43 and ongoing	Pat Stringer, B&HBCC
Non Users Survey	13 - 19		Sarah Jay, BHCC
Patronage Figures	26	M47 and ongoing	Pat Stringer, B&HBCC
D12.2 Baseline and first results from data collection	All indicators	M34	
D12.3 Draft results template available	All indicators	M48	
D12.4 Final version of results template available	All indicators	M49	

C1.2   Establishing a Baseline

With the main objectives of this measure being to increase/maintain the use of public transport and to make it easier to use, it is important to establish people's current barriers to the service. The baseline is therefore effectively the number of commercial passengers that have travelled by bus in the previous years from before the first smartcards went into circulation, and their perception of the service. This can be partly achieved using data collected from ticket machines, but also requires before user/public perception surveys, which have been done in a general form by Passenger Focus. Indicators to monitor in the public perception of the current service are:
- Accuracy of timekeeping
- Quality of service
- Perception of accessibility

Baseline year is 2010. In order to prevent duplication and ensure efficient use of resources, Passenger Focus data is being made available (taken in three separate years, 2009/10, 2010/11, 2011/12), which covers many of the areas described below. Passenger Focus is an independent organisation which we have commissioned over the last three years to undertake detailed passenger survey work that assesses customer feedback. The latest work was undertaken from April to June 2012, as the smartcard system was fully in use, and the feedback on this is therefore timely. The work is very much geared around the 4 perception factors noted above and the results can be found in the work, but crucially, the baseline really is passenger numbers; this is given in more detail in section C2.3.

C1.3   Methods for Business as Usual scenario

In the absence of this measure the investment into enabling seamless travel in Brighton & Hove would either not be addressed or unlikely to be addressed in the foreseeable future. Changes in modal behaviour could potentially result from natural growth in the local population, as well as fluctuations in the economic climate. These have been explored separate from the initiative.

Related BHCC initiatives/works and their potential impacts:

- Local Sustainable Transport Fund (LSTF). New funding for sustainable transport initiatives focussed on the academic corridor. Most works will be post-Civitas timeframe however there could be some impact upon post data collection.
- Local Transport Plan (LTP). City targets for transport which include reducing single occupancy car journeys and increasing cycling. It also includes targets for improving air quality in Brighton & Hove. The work packages that are driven by the LTP will inevitably impact upon the findings of all of the Civitas measures.

External factors and their potential impacts

- National and international commitments to tacking global warming and reducing emissions – political support for sustainable transport solutions, more funds available, increase in electric vehicles.

- Green administration newly elected in Brighton & Hove (May 2011) – on a local level, the new administration in Brighton & Hove are likely to look much more favourably on sustainable transport schemes.
- Increasing cost of fuel – as standard forms of fuel become more and more expensive there is likely to be a shift to more sustainable transport usage. Additionally, completely separate to any previous initiatives, Brighton & Hove Bus and Coach Company have purchased 13 hybrid electric double-deck vehicles during 2012 to further show their commitment to the environment.

C2   Measure Results

C2.1   Economy

C2.1.1   Benefits (these are confirmed figures)

Indicator	Before (July 2009 to June 2010)	B-a-U (July 2010 to June 2011)	After (July 2011 to June 2012)	Difference: After-Before	Difference: After-BaU
1 Operating revenues	£50,653,000	£51,630,000	£55,361,000	£4,708,000	£3,731,000

C2.1.2   Costs – Please note it is not possible to submit this information as such costs are complex and somewhat irrelevant to the report, as they cover engineering, vehicles and many other non-related costs.

Overall costs and revenue for the measure – (please note it is not possible to break down costs and revenue by individual year; revenue stated includes all smartcard revenue up until 25 August 2012):

Costs	TOTAL
Capital Costs	£899,000
Operating Costs	£67,000
Maintenance Costs	£26,000
Operating Revenues	£3,357,000

C2.2   Society

C2.2.1   Acceptance

An ongoing online user survey is being conducted via the bus company website at http://www.buses.co.uk/survey/survey-key.aspx, and initial results are shown in full in Appendix C and referred to elsewhere further down the document. Please note that no further data is available for this measure as people would not have been aware of, or accepted, the smartcard system, before it was put into use.

C2.2.2   Accessibility (this data comes from Passenger Focus research; note that as sample sizes in each year has been different, as has the exact month of the year the research was done, means this information is best as a general guide only.)

Indicator	Before (date)	B-a-U (date)	After (date)	Difference: After-Before	Difference: After-BaU
15 Perception of accessibility	95% satisfaction	92% satisfaction	94% satisfaction	-1%	+2%
16 Relative cost of service	68% satisfaction	69% satisfaction	69% satisfaction	+1%	0%

C2.2.3 **Security** (this data comes from Passenger Focus research; note that as sample sizes in each year has been different, as has the exact month of the year the research was done, means this information is best as a general guide only.)

| Indicator	Before (date)	B-a-U (date)	After (date)	Difference: After-Before	Difference: After-BaU
17 Perception of security	85% satisfaction	89% satisfaction	85% satisfaction	0%	-4%

C2.3 Transport

Table C2.3.1 Brighton & Hove Bus Company Patronage Changes

Indicator	Before (1 April 2009 to 31 March 2010)	B-a-U (1 April 2010 to 31 March 2011)	After (1 April 2011 to 31 March 2012, although still without full complete implementation)	Difference: After – Before	Difference: After – B-a-U
Bus patronage	40,017,145	41,647,167	41,871,608	1,854,463	231,441

The first year after implementation of the measure shows an increase in bus patronage above what would be expected from the Business as Usual projection (approximately an increase of 231,441 passengers). The status of the implementation by March 2012 was that the system was available to students only, with the full implementation on the bus in place by April 2012 (this is explained in detail in section **B4** above). **Patronage data was collected using information from the ticket machines on buses in all given periods noted above in table C2.3.1. Basically, whenever a ticket is purchased from the bus driver, or is shown to the bus driver (or now when a smartcard is presented on the reader), a log of that ticket purchase or use is made on the ticket machine, which then forms the patronage data.**

Figure 4: Brighton & Hove Bus Patronage

Business as Usual Patronage Data with Trendline Projection
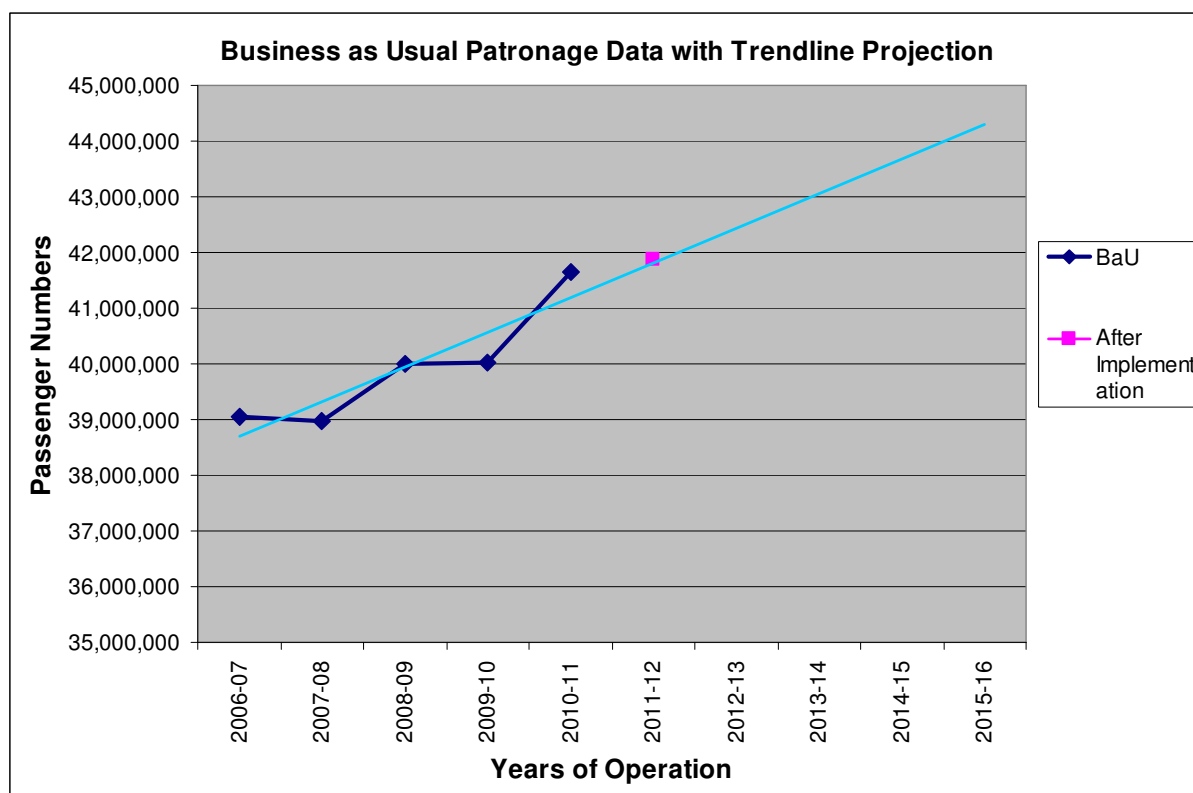
There are other factors that may have also contributed to an increase in bus patronage shown in table C2.3.1 and Figure 4, in addition to the ticketing system. These include car parking charges and parking availability in and around the city, petrol prices, the buoyant local economy (despite the recession) and a large number of special events drawing people to the city, the opening of the new football stadium, the significant investment in new buses, and enhanced services to many locations, including Brighton railway station, as well as enhancements to bus services in the evening and overnight.

C2.3.2   Quality of service (this data comes from Passenger Focus research; note that as sample sizes in each year has been different, as has the exact month of the year the research was done, means this information is best as a general guide only.)

Indicator	Before (2010-11)	B-a-U (2011-12)	After (2012-13)	Difference: After-Before	Difference: After-BaU
18 Service reliability	82% satisfaction	81% satisfaction	81% satisfaction	-1%	0%
19 Quality of service	92% satisfaction	89% satisfaction	89% satisfaction	-3%	0%
26 Modal Split	No data available	No data available	No data available	No data available	No data available

passengers					
27 Modal split vehicles	No data available	No data available	No data available	No data available	No data available

C3   Achievement of quantifiable targets and objectives

No.	Target	Rating
1	Introduce electronic ticket machines on buses	**
2	Introduce first bus-only smartcards	**
3	Evaluate user reaction to bus-only smartcards	*
4	Trial of integrated bus and train smartcard	*
5	Full introduction of integrated smartcard	*
6	Evaluation of full system	O
NA = Not Assessed O = Not Achieved * = Substantially achieved (at least 50%) ** = Achieved in full *** = Exceeded		

At the time of writing, there are 25,000 cards in regular active use, making in excess of 35,000 journeys every day (approximately 22% of all passenger journeys). Added to those making concessionary journeys with compatible smartcards, this increases to 70,000 (some 44% of all journeys on buses in the city). Total passenger journeys on the city's bus network each day are approximately 160,000.

C4   Methods for up scaling

Dependent on the initial user feedback and technological success and advances, the system could be further used to develop more tailor-made tickets and take in a much wider geographical area. As the smartcard system is now proving a success in B&H, it can potentially be up-scaled to include other services such as car club usage, cycle hire, access to leisure venues etc. In addition it could be integrated with other similar initiatives outside of B&H, such as the Oystercard system in London. In this respect, it can therefore be expanded to be used in other cities.

C5   Appraisal of evaluation approach

Timescales and resources have impacted on the ability of Brighton & Hove Bus and Coach Company to do a far-reaching evaluation of the system, however it is very indicative from both passenger numbers and general feedback through the customer services team, bus company research, Passenger Focus research and feedback from Brighton & Hove City Council's Public Transport section that the system is working very well. Obviously in time, financial and operational results will be available, and winter 2012-13 gives a prime

opportunity to do more large-scale and wider-reaching evaluation, particularly amongst non-current users of the smartcard.

C6   Summary of evaluation results

All results have been broadly positive, from the latest Passenger Focus research, and also from the 177 respondents to the bus company's own survey. A significant number of additional respondents have completed the (on-going) survey since the initial evaluation was done during June 2012 and so it will be exceptionally valuable to look again at this shortly with the significant extra information obtained of late. Initial results from June 2012 are available in Appendix C, but of note is that significant numbers of respondents have said that they find it easier to buy their tickets with the smartcard, they find it easier to use the bus with their smartcard, and smartcard users are now travelling by bus more often (23% of those surveyed), and this latter example is particularly key and shows that it is a success.

C7   Future activities relating to the measure

Dependent on the mass success of the scheme, the system could be further developed to encompass the London Oystercard scheme, although this will take place some time later beyond M48. Other bus companies in the area with compatible ticket machines could also come on board, expanding the geographic area of use much wider into Sussex. Indeed, the local train company is already planning to go network-wide with the smartcard across central southern England in late 2012/early 2013. **The survey of non-users has not at the time of writing been performed due to time and resource challenges but it is intended to undertake some work on this in 2013.**

D   Process Evaluation Findings

D1   Deviations from the original plan

- **National government intervention.**   General delays to the project as a result of issues noted in section D2. Briefly, the UK government re-franchised the local rail operations in 2008, which resulted somewhat beneficially with the present operator, Southern Railway, being awarded the contract which came into play in autumn 2009. However, this was already a year into the ARCHIMEDES project, and hence continual delays have stemmed from that, albeit at the time of writing the integrated bus/train product is now available. Similarly, the UK government decided to intervene in smart ticketing too, setting a standard format called ITSO (Integrated Ticketing Smartcard Option), which all bus and train operators in the UK are now having to conform to, regardless of what previous smartcard plans operators had, and this led to further delays to the project. Related to this, the compatible 'chips' to be fitted to all relevant equipment were also in short supply due to production problems at the UK government's Department for Transport agency, and hence whilst equipment was

fitted and installed, it couldn't be fully utilised until the production problems were sorted and both the bus and train companies received their smart 'chips'.

- **Change in evaluation indicator.** It was originally intended to collect modal split indicator data. However as the measure progressed it became clear that the number of overall public transport passengers would not increase significantly as a result of this measure during the lifetime of the measure. Instead it was felt appropriate to focus on the experience of users and the technical lessons learned.

D2 Barriers and drivers

D2.1 Barriers

Preparation phase

- **1. Political / Strategic.** Department for Transport re-letting Southern rail franchise; new franchise initiated September 2009 (M13). Work then started in earnest.

- **1. Political / Strategic.** Delay as a result of government deciding that ITSO format should be the standard for transport smartcards in the UK, meaning previous work on the project had to be shelved.

Implementation phase/Operational phase

- **7. Planning.** Delay in obtaining smart chips (ISAMs) to install in ticket machines and smartcard producing machines.

D2.2 Drivers

Preparation phase

- **3. Cultural.** The ultimate aim of the project has been the key driver in preparation phase; to produce an integrated transport ticket to encourage greater PT use and therefore benefit the environment and economy in Brighton & Hove.

Implementation phase/Operational phase

- **6. Positional.** Success of London Oystercard system

- **1. Political / Strategic.** UK government support of smartcard transport ticketing

- **5. Involvement / Communication.** Customer demand.

D2.3 Activities

Preparation phase

- **7. Planning.** Hardware/software delivery and installation; it was some time between the order for ticket machines being placed and delivery being received, but again there was continual pushing of suppliers to get this project moving as quickly as possible as a result of the delays encountered. An excellent project team was put together to plan, organise, manage and communicate and deliver this project, and get pushing itself to the limit with timescales in order to reach target.

Implementation/operation phase

- **7. Planning.** Full roll-out, close monitoring and evaluation, through quantitative measures (passenger numbers and smartcard take-up) and qualitative (passenger feedback and surveys). The introduction of smartcard products to customers was performed as quickly as possible following receipt of all the smart 'chips'; it was also crucial to ensure that all the reporting software worked as it should have done, and so extensive testing of the system was carried out before it went 'live' to the public. This did mean that it was resource-heavy in terms of number of staff undertaking the work.

- **7. Planning.** Evaluation of what has been implemented in terms of an end result has been carried out (see Appendix 3), and given encouraging results that warm to the ethos and purpose of CIVITAS ARCHMIEDES.

D3   Participation of stakeholders

D3.1 Measure Partners

- **2. Public Transport Company.** Southern Railway; partnering the bus company in achieving the integrated smartcard.

- **1. City.** Sustainable Transport, Brighton & Hove City Council; partnering the bus company in promoting the benefits of the integrated smartcard.

D3.2 Measure Stakeholders

- **Stakeholder 1 – Passenger Focus;** independent consumer research organisation that regularly undertakes detailed research into passenger satisfaction with Brighton & Hove bus services and is closely watching the smartcard development.

- **Stakeholder 2 – Brighton Bus Watch (part of Bus Users UK);** independent local body championing bus services that works with Brighton & Hove Bus and Coach Company to improve all parts of the bus service, including the smartcard system.

- **Stakeholder 3 – Brighton Line Commuters Association;** independent local body championing train services that works with Southern Railway to improve all parts of the train service, including the smartcard system.

D4 Recommendations

D.4.1 Recommendations: measure replication

- Excellent potential for the future; the system will go national in years to come. The **technology and infrastructure** are being rolled out across the UK to enable this to happen, and Brighton & Hove were one of the first cities in the UK to have access to this technology and infrastructure. The team are more than happy to give encouragement and advice to other cities wishing to take up such a scheme, and mobile phone technology is now coming to the fore so other cities also need to watch this closely.

- Ensure **project teams** are in place and have a clear project plan with tangible timescales and results. People are key to delivering such a complex project as this and communication at all stages with all team members is vital. **Plan** every step of the way.

- **Continually push suppliers** to deliver a system that you want and need. If you don't accurately define your requirements, suppliers will give an off the peg solution which won't necessarily meet your needs.

D.4.2 Recommendations: process (related to barrier, driver, and action fields)

- **Liaise with all stakeholders and suppliers** on a regular basis to keep them on board and ensure they are performing and delivering.

- **Communicate to customers** what is happening; this is crucial in ensuring success of the system.

- **Continually review implementation** as it happens; as much as you can simulate events in testing, it is only when things go 'live' on a large scale with the public that the real test begins, and you need to support them and review all activities on a regular basis.

E   Summary time schedule* *(incorporates changes made as a result of delays to project)

Task No.	Task name	YEAR 1												YEAR 2												YEAR 3												YEAR 4											
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
2.4		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■																						
	Purchase																							▨	▨	▨	▨	▨	▨	▨	x																	
	Introduction																															x	X	▦	▦	▦												
																																		▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮		
Evaluation tasks																																																
Non-user survey																																		▮											▮ X			
Online survey																																		▮	▮	▮	▮	▮	▮	▮	▮	▮	▮	▮				
Sales records																																																
Process evaluation report																																		x									x					
Deliverables																																																
M12.1 Draft MLEP								x																																								
D12.1 Final MLEP											x																																					
D12.2 Baseline and first results																																	x															
D12.3 Draft results Temp																																																x
D12.4 Final result temp																																																X

Appendix A – Coming Soon advice to the public (April- August 2011):

<u>Smartcard Update</u>

You may have noticed that, in addition to new ticket machines, we have also recently installed smartcard readers on board buses. At the moment, our staff are testing the system with their own passes to ensure that both the hardware and software perform as we expect them to.

From 1 August, those with national concessionary passes will also start to fully use their passes as smartcards; since 2008, all national concessionary passes have been smartcards, and we are delighted to now be able to accept them as such. All you need to do is place your pass on the reader, wait for a single beep and green light, and then find a seat; you won't even need to take a ticket anymore! The card can be placed on the reader in any way you wish, as long as the chip inside the card makes contact with the reader. Please ensure that you only place one card on the reader at any time; cards that are stored in wallets with bank cards, other national concessionary passes or smartcards may cause the reader to decline the card until placed back on the reader on its own. If the reader does not accept your card at all, then providing it is not date expired, we will still allow you to travel but the driver will issue you with a paper ticket instead; you will need to check with your local authority who issued the card (contact details should be on the rear of your card) in case there is a problem with the smart chip inside the card. As we haven't issued the cards ourselves, we can't necessarily tell what the problem may be.

From the autumn, we will commence rolling out our "SAVER" ticket range on to smartcard too, although this will be a gradual process into spring 2012. We also plan an integrated ticket option with Southern Trains towards the end of 2012, and we are also looking at the possibilities with Pay As You Go options during 2012 too. We will be keeping our website www.buses.co.uk fully up to date with all the latest developments as they happen.

Appendix B – Frequently Asked Questions put on the website www.buses.co.uk

'The key is our brand new smartcard, and is a great way of buying and using tickets to travel on our buses. It is free to everyone, delivered direct to your door, and makes your journey even easier.'

'And don't worry if you lose your key. We can stop it instantly so you don't lose your tickets and send you a replacement.'

How do I get my new key?

Simply come into 1 Stop Travel at Old Steine or Brighton Station. We'll take your details (or if we've already got your details, we'll transfer them over on to the key computer system), ask what product(s) you want to put on your key and away you go. You can then top up online at your convenience 24 hours a day or pop into 1 Stop Travel. We will also be doing some promotional events where you can come along and get your very own key and 1 day's free travel to try it out; watch out for more information! We'll also regularly send you special offers if you sign up to our email list too.

Buying tickets for the key

There's a wide choice of ticket deals available on the key. The more you spend up front, the more you will save per day. Buying online is the cheapest way to purchase one of our tickets for travel.

How do I use my key on the bus?

To use your key on the bus all you have to do is place your key on the smartcard reader. The smartcard reader will beep and show you a green light confirming that the ticket is valid for travel. You can then take your seat and enjoy your journey.
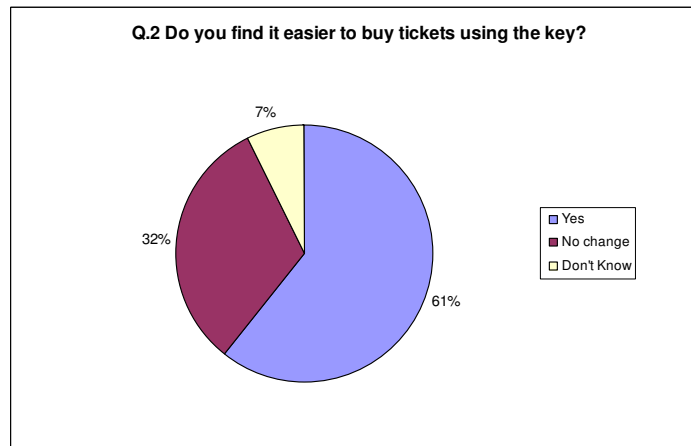
Can I use my key on any other company's buses?

No, not yet. Your Brighton & Hove Key will only allow travel on Brighton & Hove buses. However, during 2012 we will be carrying an integrated ticket trial out with local train operator Southern; watch this space. Much longer term, there is the possibility that tickets on your key may become accepted by other bus operators, but they would need to have ticket machines and readers that can accept the same ITSO smartcards that we have adopted.

Appendix C – Awareness & Acceptance User Survey – Initial Results from June 2012 (177 respondents)

Q.1 How long have you had a 'key' card?
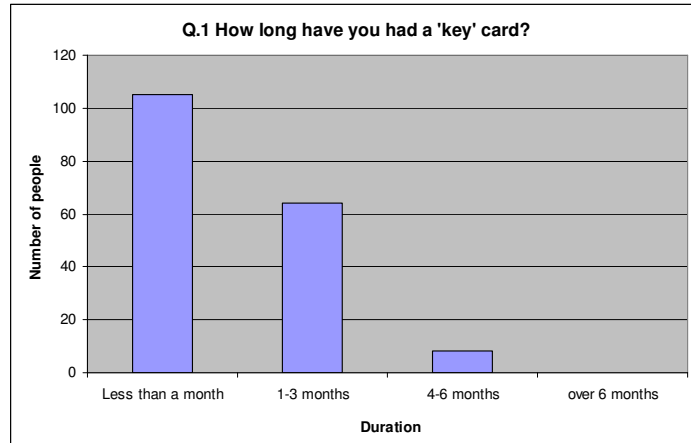
Less than a month	105
1-3 months	64
4-6 months	8
over 6 months	0

Q.2 Do you find it easier to buy tickets using the key?

Yes	**107**
No change	57
Don't Know	13

The key note here is that 60.1% of people are finding it easier to buy their tickets with the smartcard.

Q.3 Do you find using the key makes using the bus easier?
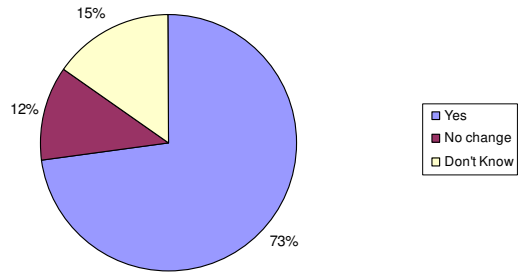
Yes	**129**
No change	21
Don't Know	27

The key note here is that 72.9% of people find using the bus easier with their smartcard.

Q.4 How often do you top up your card?
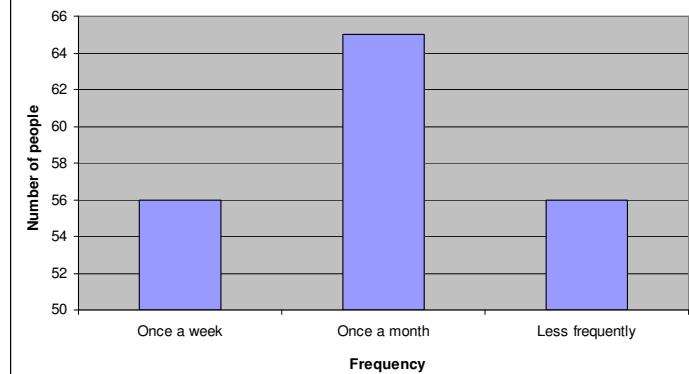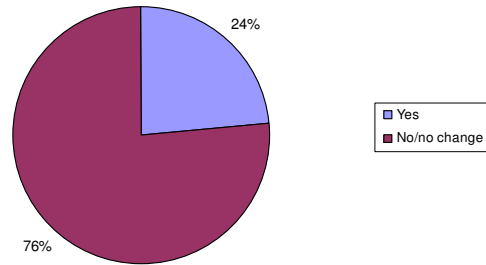

Once a week	56
Once a month	65
Less frequently	56

Q.6 Do you use the bus more often now you have a key card?

Yes	**42**
No/no change	135

The key note here is that 23.7% of customers are using the bus more often now that they have a smartcard.

ENDS