



Aston Pride Project Variation

Review and Independent Advice to GOWM

Client: Government Office West Midlands

Paul Nash of Pental Project Support Services Ltd in his role as a Local Improvement Adviser has been commissioned by Government Office West Midlands to undertake an independent review of the Project Variation submission from Service Birmingham for "ICT Phase 3 Computers in the Home" part of the Aston Pride New Deal for Communities.

Pental Ltd
10/16/2009

Document Control

Title

Aston Pride Project Variation

Intended Audience

Government Office West Midlands

Document Owner

Penval Ltd

Ash house, Church Street, Prees, Whitchurch, Shropshire, SY13 2DQ

T: 01 948 840 726

M: 07 525 198 927

E: info@penval.co.uk

W: <http://www.penval.co.uk>

Version Control

#	Version	Date	Initials	Description
1	1	16 th October, 2009	PEN	Initial Draft
2	1.1	19 th October, 2009	PEN	Draft for Circulation
3	2.0	20 th October, 2009	PEN	Changes from Dale Guest Interview
4	2.1	26 th October, 2009	PEN	Changes from Mark Tovey Comments
5	2.2	28 th October, 2009	PEN	Changes including 2005 evaluation by Don Passey

Contents

Document Control.....	2
Title	2
Intended Audience.....	2
Document Owner.....	2
Version Control	2
Background	4
Evidence of Need / Demand and Impact.....	5
Progress with the original project.....	5
Community Benefit	8
Extent to Community Involvement.....	8
Measurable outputs and impacts	9
Costs.....	10
Option appraisal.....	11
Value for Money	12
Appropriateness of the Technical Solution.....	12
Delivery within the timescale proposed	13
The fit with existing ICT infrastructure	13
Long Term Viability	15
Risks	17
An Overall Recommendation	18
Annex 1: Deloitte Findings:	19
Annex 2: Actions Arising From the Deloitte Report.....	20
Annex 3: Risks	24
Annex 4: Works Cited.....	31

Background

Paul Nash of Penva Project Support Services Ltd in his role as a Local Improvement Adviser has been commissioned by Government Office West Midlands to undertake an independent review of the Project Variation submission from Service Birmingham for "ICT Phase 3 Computers in the Home" part of the Aston Pride New Deal for Communities.

The project variation is for £966,300, 32% of the original project cost of £2,965,165. The Appraisal Panel have approved the submission for consideration by the Board subject to a "forward strategy condition" to include:

"Who will manage the project once Aston Pride has finished, the financial projections, what they will cover, maintenance of wireless network, how Service Birmingham will maintain the project and the management of the schools hub"

This report has reviewed the documentary evidence submitted to the Appraisal Panel and has conducted interviews with members of the delivery team and representatives from New Deal for Communities:

Mohammed Islam	NDC Project Officer
Avtar Dhillon	Service Birmingham
Mike Farmer	Schools Liaison Officer
Dave Brody	Schools Liaison Officer
Dale Guest	NDC CEO

The IT in the home project arose out of an identified need in 2002 where poor take up of ICT was linked to poor educational achievement and increased risk of the community falling into a digital divide.

At that time the project was in line with the 2002 UK Online national action plan as outlined in the annual report 2003 (Office of the E-Envoy, 2003)

addressing motivational barriers which are keeping some segments of society away from internet use (eg the elderly) and encouraging more sophisticated patterns of use for those who are already online;
increasing user confidence and trust in the internet (eg privacy);
promoting ICT skills as a third skill for life and embedding e-learning into the wider educational agenda

The activity also supported the Regional ICT Strategy (Advantage West Midlands, 2003)

Effectively remove the digital divide through 100% availability, high quality accessibility, and by stimulating take-up in all communities
Raise the quality, accessibility and economic impact of knowledge services, particularly for learners and employers
Make citizens, communities and social enterprises more aware of the relevance and value of public sector services to stimulate ICT adoption and encourage greater access to knowledge opportunities.
Maximise the accessibility, adoption and benefits of the region's knowledge offering to improve personal creativity, prosperity and quality of life

The project objective was to tackle demand side market failure in order to address the poor educational and economic performance of the Aston Pride Neighbourhood area through the use of ICT. Following an initial trial using British Telecommunications (BT) Asymmetric Digital Subscriber Lines (ADSL) it was felt that an alternative approach allowing greater flexibility in the use of technology was required. A further pilot study was undertaken in 2005/6 involving 80 homes and taking feedback from parents. It was decided to adopt an approach put forward by Gaia Technologies PLC a Bangor based company. A campus network was created using 802.11b unlicensed wireless technology. The solution broadcast the internet to intermediate aerials located on high buildings and then re-broadcast to directional aerials in line of site affixed to homes where it can be taken by fixed wire to the home computer. Families were recruited through local schools with the objective of pupils being the route through which family members become engaged with ICT and learning.

Evidence of Need / Demand and Impact

The initial impact of the project was that 80% of pupils from participating schools fell within the wireless cloud.¹

The advantage of the approach was that it provided access to IT in a controlled environment which responded to the fears of neighbourhood families relating to unrestricted access to the internet. It provided a service at a very low cost (£10 per household) above which it was feared that take up of service would suffer. The service also provided a learning environment that linked closely with that of the school and through which both children and adults can participate.

Progress With The Original Project

Early evaluation studies by the University of Lancaster have suggested that over 800 families, equating to between 3000 and 4000 individuals could benefit from access to IT and the Internet and they could be supported in learning how to use these resources primarily by using the schools as the learning resource.

Although the pilot project was initially viewed at an early stage (only 3 or 4 months had lapsed since computers and internet were installed in homes in most cases), the pilot outcomes suggested that this was an approach to supporting community skills that should be taken further. The report highlighted the fact that outcomes at that time were already indicative of high levels of engagement and outcome, suggesting a potentially wider application of the approach. (Passey, 2005)

In particular Passey's report highlighted the following:

- The pilot was successful, and pupils and family members appreciated the opportunity that had been offered.
- A large number of family members used the ICT facilities, so that 15 machines were providing levels of access and use to 124 people. This level of leverage was high, and widening the pilot could produce a very high level of leverage across the Aston Pride area (2,000 people could be affected if all pupils in Prince Albert J/I School were involved), and a figure approaching the entire population of Aston Pride could be affected if all schools and pupils across Aston Pride were involved.

¹ Those falling outside of the cloud (140 households) were connected to the network using BT ADSL using funding from the then Department for Education and Skills (DfES)

- The ICT facilities were being used to support work and employment. Many family members used the ICT facilities to support school work, coursework and homework. Of the 15 families, 11 fathers, 1 mother and 6 other family members used the facilities for work purposes. Examples of enhanced business prospects, enhanced business efficiency and enhance business effectiveness were identified.
- Many family members were using computers for the first time (13 mothers and 7 fathers are included). There were reports of ICT skills that had been developed and applied that had not been accessible before.

The report into phase 1 strongly recommended that consideration be given to how the pilot could be developed across Aston Pride, involving all pupils in Prince Albert J/I School, and progressively all pupils in all schools across Aston Pride.

“Evidence indicates that this pilot is working successfully within the context of the Aston Pride community. A widening of this pilot could have a strong and wide impact on community needs in the future.” (Passey, 2005)

The commissioning report for phase 3 also highlighted the pivotal role of the schools in the engagement of the community, the success of the delivery platform and the national recognition of the Gaia delivery model.

However, the phase 3 commissioning report also highlighted a number of issues with the implementation of phases 1 and 2; *See Annex 1.* (Deloitte, 2008) There were concerns about:

- Standards of governance and effective project management,
- The impact on staff resources in the participating schools
- The effectiveness of the broadband centres and the level of first line support.
- The sustainability of the project post any phase 3 implementation.

The issues around first line support have highlighted a technical limitation of the Gaia technology which is based around 802.11b standard for unlicensed Wi-Fi. These issues are highlighted in the Project Highlight Report for the period 12/03/2009 to 31/08/2009. The report refers to:

- Supplier issues relating to wireless connectivity.
- Network outages in June and July 2009 and a downtime of 1 month in total.
- Increases in call volumes with user expectation proving difficult to manage.

As a result of the interviews with the delivery team and project manager it appears that the original technical design cannot scale to the demands of phase 3. This is related to the capacity of the equipment and the limitations of unlicensed technology which is subject to interference from the increased presence of domestic Wi-Fi equipment as it becomes more common place. **This has had an impact on the success of phase 2 which is reflected in the loss of some project participants due to the unsatisfactory performance of the network.**

The Deloitte report for the commissioning of Phase 3 suggested that unless there was an extension of the current network to take in the remaining homes in the Aston Pride it would not meet the regional average for the uptake of ICT and its sustainability would be at risk:

“There is general consensus that the project could become self sustainable by 2011 and ICT would become part of ‘everyday life’ in Aston. The contribution of £10 per month would support sustainability. However, the current target to rollout 1700 desktops would only account for 37% of Aston Pride households with broadband access. This falls below the regional average of 57%.” (Deloitte, 2008)

The report also proposed a re-focussing of the project to take into account the following:

1. Educating the whole family
2. Find improved ways of engaging with both adults and the Aston Pride NDC themes whilst continuing to build on the attainments achieved to date at key stages 2 and 4
3. Broader use of the Internet and providing users access to information, goods and services which more affluent communities take for granted. Equipping residents with a computer with broadband access is inherently beneficial in social and economic terms.
4. Ensure the required support networks are in place.

A review of the project documentation submitted with the Project Variation request shows that the majority of the Deloitte concerns outlined in Annex 1 have been addressed (*See Annex 2*). **What remains are the technical problems inherent in the existing infrastructure.** It is these that the current variation request is intended to address in order to provide a sustainable technical platform and support infrastructure based around the “Cyber Centres”² and to support the exit strategy. This will retain the principle of a campus network over the Aston Pride NDC area but will move the technology to a platform which uses 5 GHz 802.11a which is not subject to the problems of the 802.11b standard

The impact of the revised infrastructure will enable participation in the National Computers in the Home Project and this in turn will assist in achieving the outputs. Unless the infrastructure issues are addressed the project will not complete and the measurable outputs listed below will not be achievable within the current project plan.

² Cyber Centres are school based facilities for providing adult training in a familiar and controlled environment and supporting the accredited and non accredited qualifications.

Community Benefit

The direct benefit to the community is in:

- The provision of low cost broadband services which many families would not otherwise be able to afford. Access to new network users not able to use the current infrastructure.
- Improved access speeds beyond the minimum universal service offering currently proposed by The Digital Britain Report.
- The offer includes both Sophos Antivirus and Cybersentinal filtering. Cybersentinal provides essential reassurance to parents that the content accessed by children is safe and appropriate. The security is the same as is used in the schools.
- The families also receive a computer which is loaded with a selection of educational software the same as is in use in the schools plus access to the Microsoft Office suite of programmes.
- The families also receive help from a dedicated, multilingual support team who monitor the network and provide home support.
- Through the Cyber Centres the adults can access both accredited and non accredited learning opportunities as well as receive additional ICT training.

The indirect benefit to the community is in:

- Improved employment opportunities because of elevated skill levels.
- Improved community engagement through working with the project.
- Improved access to online public services.

The new network offers increased capability in a number of areas:

- Potential for improved content delivery: telepresence, e-health care, cloud computing for small business and ultra-local content.
- Improved benefits from on line services such as shopping, banking, self publishing and communication
- Flexible response to unforeseen events such as pandemics.

It should be understood that the increased capability is not a direct benefit at this stage. **There is currently no visible strategy in place to convert the capabilities to a directly measurable benefit.** There are connections in place with the health theme and with Birmingham City Council that could facilitate this and it may be appropriate to actively promote the capability and seek partners to develop this.

Extent to Community Involvement

The principle engagement with the community is through the schools in the Aston Pride Area. To date this has involved 800 families from 5 schools. The intention is to include the other schools in the Aston Pride area, including the Special Schools and to increase the number of homes by 1700 to engage at least 2500 family members in ICT training.

In order to develop the relationship through the schools the proposal includes funding for the creation of a Cyber Hub and three Cyber Centres. These will be part financed by the project and

match funded by the host schools. The host schools will commit to outputs during the lifetime of the project and will form part of the sustainability strategy.

Figures from phases 1 and 2 suggest that each computer placed in an Aston pride home will be used by 5 other family members and not just the child beneficiary. The project has trialled a health benefits CD which targets the abnormally high number of diabetes sufferers in the neighbourhood. This has been very successful and will be subject to a public launch in the near future. This provides evidence of the wider engagement of the community as well as the potential for converting the capability for e-health activities into measurable benefits.

Measurable outputs and impacts

Target	Additional	Total
Number of pupils benefitting	1750	2500
Number of schools benefitting	7	14
Adults obtaining non-accredited qualifications	1221	1250
Number of adults obtaining/registering for accredited qualifications	125	125
Number of residents accessing Employment/Training advice	1200	1200
Number with disabilities accessing mainstream training	30	42 by 2011
Number of women accessing mainstream training	50	90 by 2011
Number of training weeks	24	24

Source: Revised NDC Outputs 23rd September, 2009

Costs

Network Capital Costs including Installation

Number of major cells	5	£17,200	£86,000
Number of 1.2 Gb links	5	£23,000	£116,000
Number of small cells	4	£6,400	£25,600
Number of 100Mb wireless links	4	£6,800	£27,200
Cisco 6509 with WISM controllers	1	£56,000	£56,000
Other Management Hardware and Software	1	£23,000	£23,000
New CPE Installs	1700	£225	£382,000

Total **£716,300**

Cyber Hubs/Centres Capital Cost

Cyber Hub	£90,000	£90,000
Cyber Centres	£160,000	£160,000

Total **£250,000**

Total Capital Costs **£966,300**

Ongoing Revenue Costs

Service Costs	£7,500
Staffing support team	£130,000
Accommodation (Absorbed in- house)	£0

Total Revenue requirement p/a **£137,500**

Source Project variation Report 23rd September, 2009

Option appraisal

Option A	No action	The current infrastructure will continue to underperform. In addition to loss of existing subscribers it will not be possible to bring new subscribers onto the network. To complete the project existing subscribers would have to be transitioned to a commercial Internet provider. There is a risk that the value added services could not be provided through this route and the impact of the project would be constrained. Targets are less likely to be achieved.	Initial Capital Cost: £322,500 Ongoing line rentals: £472,500 Ongoing ISP costs: £63,375 Total ongoing costs: £535,875 <i>Note: Even if a low cost ISP could be found at sub £10 the line rental costs would be a disincentive to most families in the area and an unsustainable cost to the legacy project.</i>
Option B	Repair and extend the current infrastructure	Whilst the current infrastructure could be repaired and made to work this would not solve the current issues around 802.11b equipment which is subject to interference from domestic equipment. The overhead of having to constantly address this issue makes it an unsuitable option	None available
Option C	Replace the current infrastructure with 802.11a standard operating at 5Ghz and extend the reach of the network	Whilst there are significant initial costs the new infrastructure will deliver the remainder of the project. It meets the requirement of a secure and reliable infrastructure and provides a capability to deliver value added services beyond the life time of the project	Initial Capital Cost: £716,300 + £250,000 for the Cyber Centres. Ongoing costs £137,500 pa

		subject to the appropriate management of risks. The ongoing costs are significantly lower than a commercial provider using ADSL.	
--	--	----------------------------------------------------------------------------------------------------------------------------------	--

Value for Money

Option A

Capital Cost Per School Age Beneficiary	£129
Capital Cost Per Other Beneficiary	£32.25

Revenue Cost Per School Age Beneficiary	£214.35
Revenue Cost Per Other Beneficiary	£53.59

Option C

Capital Cost Per School Age Beneficiary	£386
Capital Cost Per Other Beneficiary	£96.58

Revenue Cost Per School Age Beneficiary	£55
Revenue Cost Per Other Beneficiary	£13.75

Appropriateness of the Technical Solution

The initial capital cost for Phase 3 of the project is high. The majority of this cost is as a result of replacing the 802.11b network with the scalable and robust 802.11a standard. This amounts to almost 90% of the network costs and 66% of the total project variance. 802.11a is an IEEE standard³ established in 1999.

“The 802.11a amendment to the original standard was ratified in 1999. The 802.11a standard uses the same core protocol as the original standard, operates in 5 GHz band.... with a maximum raw data rate of 54 Mbit/s, which yields realistic net achievable throughput in the mid-20 Mbit/s. 802.11a is not interoperable with 802.11b as they operate on separate bands, except if using equipment that has a dual band capability. Most enterprise class Access Points have dual band capability.

Using the 5 GHz band gives 802.11a a significant advantage, since the 2.4 GHz band is heavily used to the point of being crowded. Degradation caused by such conflicts can cause frequent dropped connections and degradation of service. However, this high carrier frequency also brings a slight disadvantage: The effective overall range of 802.11a is slightly less than that of 802.11b/g; 802.11a signals cannot penetrate as far as those for 802.11b because they are absorbed more readily by walls and other solid objects in their path.The increased number of usable channels (4 to 8 times as many in FCC countries) and the

³ "802.11a-1999 High-speed Physical Layer in the 5 GHz band

near absence of other interfering systems (microwave ovens, cordless phones, baby monitors) give 802.11a significant aggregate bandwidth and reliability advantages over 802.11b/g.” (IEEE 802.11a-1999, 2009)

This means that the proposal from Tempus offers significant advantages over the existing 802.11b infrastructure although it will mean replacing the existing 802.11b equipment in its entirety.

Delivery within the timescale proposed

Given that the original proposal from Tempus was presented in March 2009 there will be significant challenges in delivering the entire network within the timescales proposed. Link2ICT, the project management vehicle for Service Birmingham, have suggested that they would welcome a change of supplier from the current provider, Gaia. While no wider evidence was presented **the assumption is that a procurement exercise has taken place** which would justify the adoption of Tempus as preferred supplier for this project.

Tempus, in their proposal, have made a number of clear assumptions as a pre condition for the success of any implementation:

- BCC negotiate, provide and fund:
 - Access to properties identified, including any ongoing leasing arrangements
 - Planning permission / building permission where required
 - Road closures for access equipment
 - Ofcom licensing where required
- All pricing represents a budgetary quotation. A more detailed costing would only be able to be provided on the basis of a full audit of existing infrastructure
- Backhaul links are assumed to have ‘line of sight’ capability

Given these assumptions it is clear that a period of preparatory work needs to be undertaken before work can begin and the budget needs to be confirmed with detailed quotations. **These assumptions represent significant risks that are not reflected in the risk register.**

It is my belief that should funding be approved before the end of 2009 then work could potentially begin in March 2010 giving 12 months for completion of the project. **This is feasible but will require significant management of the risks.**

The fit with existing ICT infrastructure

The Project Variance Request includes as evidence the submission Instructions for proposals to provide wireless services issued in October 2009. This document does not specify a technology but a service standard:

“It is envisaged that the Council will require a wireless roaming service for its staff to provision agile working and remote access where possible across Birmingham. Wireless Roaming facilities based on traditional WiFi technologies should be deployable alongside any technology deployed as part of all services within this RFP. i.e. Wifi points terminating on specific point to point, or multipoint services and within current MPLS connected sites to provide “cloud” based Wifi access at strategic locations” (Murphy, 2009)

The solution proposed in the Project Variance evidence (Tempus, 2009) would be compliant with the standards set out in the Service Birmingham RFP. Given the 7 month difference in the issuing of the original Tempus proposal and the Service Birmingham RFP it is unlikely that the former was intended to be a direct response to the latter. That said, the compliance of the Tempus proposal does provide a sound route to the realisation of the wider potential benefits that the Aston Pride network could deliver if a benefit management strategy were implemented.

I have little doubt that at some point in the future Birmingham city would want to implement a wireless network within the Aston area to support the delivery of services. The additionality here is that:

- The proposed new network will deliver the needs of the Aston Pride project now whilst retaining the potential to meet future service requirements of the City council without implementing a second network.
- There is no evidence presented of an intention to implement a BCC wide network in the immediate future, should they do so there no evidence of an intention on the part of BCC to meet requirements other than those of their own service delivery.

The cost of the phase 3 extension of the network, less premises installs, amounts to £68,952 just under 10% of the total network costs.

£250,000 is for the Cyber Centres which aim to fulfil the recommendations of the Deloitte report for whole family education and wider Adult engagement. This represents 25% of the total phase 3 project variance requests.

The value for money is realised in Option C in terms of the ability to complete the project which is unlikely under the current infrastructure arrangements (Option B). Subsequently the ongoing costs of Option C compare favourably when set against a fixed line ADSL option (Option A) and this improves the sustainability of the network post project.

There is a potential for added value services beyond the original project specification in the form of enhanced capability. This capability will only be achieved if it is pro actively managed in order to realise the benefits in terms of new services to the people of Aston.

Long Term Viability

The plans for the long term viability of the Aston Pride network are currently under development at Management level. The interview with the delivery team highlighted their current thinking:

- The network would become community owned
- Schools would continue in their role of champions and being the main route to engagement.
- Schools will undergo an accreditation process to obtain the ICT Mark: “The ICT Mark is the third level of the Next Generation Learning Charter. (Level one being Committed to ICT, and level two being recognised for ICT.) The ICT Mark is a national accreditation scheme which recognises schools for their achievements in reaching a standard of maturity in their use of technology” (BECTA, 2008)
- Schools would undergo a quality process using the Self Evaluation Framework: “Ofsted’s school self-evaluation framework (SEF) has recently been updated to include reference to the extent to which learners adopt safe and responsible practices in using new technologies, including the internet.” (BECTA, 2007)

The current state of planning is a potential risk area for the long term viability of the project and given that project closure is 2011 it should be a priority action.

Experience of other local authority created networks strongly suggests sustainability is difficult once local authority intervention ceases. Examples of where local authority community IT projects have continued can be found in Sunderland and in Shropshire. In both cases the project outcomes have been embedded into local authority operations.

There are four likely outcome possibilities for when the project ends:

- The network becomes community owned and operated as proposed.
- The network is terminated and the community moves to a commercial provider.
- The network is sold to a commercial provider and the community is transitioned to the new operator on a commercial basis.
- The network becomes part of Birmingham City Council’s operational model and value added services are developed to the benefit of the community.

Detailed consideration of the likely business models post project are beyond the scope of this report. The revenue model based on the ongoing income / operating costs is positive though somewhat optimistic and further modelling of the options should be undertaken as part of the sustainability planning.

Unless the current network in Aston is replaced the Computers In The Home project for phase 3 will not be possible in its current form. The reported unreliability of the existing wireless infrastructure and the subsequent loss of confidence by the residents of Aston in its ability to deliver a service will undermine the successes of phases 1 and 2.

The replacement network is not an immediate subsidy to a wider Birmingham service. Conversely, were the proposed networks not compliant with any network developments within Birmingham it

would not be able to deliver the wider, long term potential benefits outlined in the section on Community benefit. What would represent poor value for money is if Birmingham City Council as part of some future development found it necessary to build a second network running parallel to the proposed one.

The revenue model is based on a 66% recovery of a £10 subscription to the network. The evidence leads to a belief that the revenue costs going forwards are optimistic. The model needs to be far more sophisticated and consider elements of customer churn and attrition as well as the potential for premises costs after the Aston Pride project completes in 2011. There are also recruitment costs and equipment costs for staff that are not reflected in the model. That said, the potential for recovering in the region of £200,000 - £300,000 annually is an attractive proposition. A major problem within phases 1 and 2 of the project was the unwillingness or inability of some of the residents to pay the service subscription. This experience underpins the 66% revenue recovery target. The Project Variance Documentation and the interviews with the delivery team have highlighted the improved revenue collection through the use of the Aqua database. The lack of sophistication in the revenue model is a significant risk and this should be mitigated as a matter of some urgency.

Risks

The risks currently associated with the project (See Annex 3) clearly identify the problems around the current network infrastructure that the Project Variation is intended to resolve:

- PH3_R_001: The CiTH project may not be in a position to support all the pupils on the project with internet connectivity?
- PH3_R_004: Wireless interference might compromise the quality of service in some areas.

PH3_R_001 has been posted as an unresolved issue since January 09.

There are significant risks that are not currently reflected in the risk register in relation to the implementation of the replacement network and in the execution of the exit strategy.

- There is a significant risk that the assumptions underpinning the proposal from Tempus are not realised in fact and the timescale and budget for the delivery of the replacement network is compromised.
- There is a risk that the new project capabilities will fail to become realisable benefits. In mitigation there should be some element of benefits management which will seek to develop the links with other themes within Aston Pride NDC.
- There is a risk that a commercial provider could make a challenge to the subsidy as a distortion of the market in that area. The network capability is a means of tackling demand side market failure resulting from a number of factors: capability, capacity, and cultural. The success of the project in addressing these issues would result in the Internet being embedded in the life style of the community as well as enhancing the life chances of the citizens of Aston. That being the case the potential for a challenge should be considered and appropriate mitigation put in place.
- There is a risk that the development of the sustainability plan is not as advanced as it needs to be given the timescales to completion of the project. There are a number of possible scenarios (See section on Long Term Viability).
- There is a significant risk that the revenue model may be optimistic and a more sophisticated model needs to be developed to account for a greater range of potential variations in income over time such as subscriber attrition.

An Overall Recommendation

Recommendation	Rational
1 The Project Variation to be approved	1) Achievement of the overall project objectives and the successful implementation of “Computers In The Home” is unlikely if the network upgrade and extension does not take place. 2) Despite the high capital expenditure (30% of the total project cost) it: a) increases the sustainability options post project, b) provides good value per money on a revenue cost per beneficiary basis, c) provides the potential for the development of value added services.
2 Final award of funding should be conditional on a re-working of the risk register to address the potential issues raised in the risk section of this report.	a) Realisation of the Supplier assumptions are critical b) Benefits realisation are a critical part of value for money c) State Aid issues could blight the project d) Late sustainability planning could threaten the long term viability of the project e) Poor revenue modelling could leave the long term viability of the project seriously jeopardised.
3 Post project risk planning begin at the earliest opportunity	There are a potential risks that will arise post project relating to: a) added value services b) market place intervention c) sustainability
4 Sustainability Planning should be intensified as a priority	a) The level of capital investment opens a number of new capabilities which will only become benefits for the community if work to realise them is undertaken. b) The ownership options require detailed analysis c) Revenue models need further detailed analysis and proving.

Annex 1: Deloitte Findings:

1. In Summary we cannot find evidence of effective project management and adherence to the governance structure as detailed in the Phase 2 proposal. Whilst the project has achieved a number of its objectives, roles and responsibilities are not clearly defined and there appears to be uncertainty and diluted overall ownership of the project.
2. In summary, schools have been pivotal to the engagement of the community and the successes of Phases 1 and 2. It was evident schools are supportive of the CiTH Project but have concerns around the impact on staff resources and the support levels required. In addition, schools need to have complete class groups with access to home computers and therefore address equality and accessibility issues. Schools appreciate the need to be better equipped to fully reap the rewards from the CiTH Project. It was evident from our discussion with head teachers schools were committed however this does need to be examined further.
3. In Summary, the technical solution has played an important part in ensuring the engagement of the Aston community. Standalone computers were chosen as they best represented the concept of a family computer. The delivery platform has been designed to ensure secure, controlled and filtered internet connectivity.
4. The Gaia delivery model has attracted interest nationwide and is now being trialled as part of Birmingham City Council's universal access initiative. Successful trials will result in the whole of the Aston area having access to the wireless infrastructure. A successful partnership with software houses has initiated the concept of a community licence. As a result, this has reduced the cost of procuring additional licences.
5. However, the project has failed to realise the true potential of the broadband centres. The closure of two broadband centres could have been prevented had the project undertaken an initial feasibility study. There are concerns from both the schools and community around the current provisions of first line service support. The requirement for a multi lingual Service Desk is imperative. Our findings found no evidence of support calls classification or any service level agreements between service providers and the use of a support knowledgebase.
6. In summary, the c£2m investment to date has delivered a wireless infrastructure, 6 broadband centres (2 of which have been closed), and 690 computers in the home. Following a review of the project spend to date, number of discrepancies have been identified that require further investigation.

Annex 2: Actions Arising From the Deloitte Report.

Deloitte Recommendations	Link21CT Highlight Report	Link21CT Project Documentation	Project Variation
To achieve the 52% national average it is proposed that every key stage 2 and 4 pupil be provided with a desktop and internet connection.	All 11 schools in Aston Engaged plus 3 Special Schools	Additional 1800 connected homes to the existing 700 connected homes making a total of 2500 local homes – outside of cloud only BT ADSL connections used, others will have to be provided privately!	
Reduce the number of broadband centres to one based on the centre of excellence model	ICT van being sold. Use of APNA centre reduced to drop in.		
Adopt Prince 2 and create an appropriate PID that describes: <ul style="list-style-type: none"> Objectives Approach Budget Business Case Organisation 		CITH Phase 3 will be lead by a Prince 2 practitioner managing each stage of the delivery within a PMO environment	
Appoint PT Project Manager to work with key stakeholders	Link21CT attend parents evenings Staff attend AP festival	School liaison and service level functions	
Create centralised repository for knowledge sharing	Website redesigned		
Adopt revised project structure		Yes	
Appoint BCC Project Officer to be responsible for <ul style="list-style-type: none"> verifying outcomes, 			

Deloitte Recommendations	Link21CT Highlight Report	Link21CT Project Documentation	Project Variation
payment of invoices, and commissioning evaluation reports			
Establish PMO			
<ul style="list-style-type: none"> Admin support 	Aqua Payments tracking database	<p>It has been agreed by the board to provide effective project governance.</p> <p>Link21CT developing payments tracking system.</p>	
<ul style="list-style-type: none"> Install management 	165 PCs installed to date of which only 25 are wireless, 20 wireless repairs due to inclement weather and CPE device failures		
<ul style="list-style-type: none"> First Line support 	Support team stretched due to managing installs and long lead times	Deliverable - Community technical support	
<ul style="list-style-type: none"> Call classification 		Deliverable - Helpdesk technical support call logging for residents	
<ul style="list-style-type: none"> Review hw support 		Deliverable - PMO technical team working with the schools liaison manager	
<ul style="list-style-type: none"> Implement SLA 		School liaison and school service level functions	
Prince Albert J/I as a			Cyber hub learning centre @ cost of

Deloitte Recommendations	Link21CT Highlight Report	Link21CT Project Documentation	Project Variation
model or benchmark			£140,000 (£90,000 requested)
<p>Schools to show commitment</p> <ul style="list-style-type: none"> • Infrastructure • Staff development • Open communication between schools 	2ns Inspire workshop at Prince Albert's School		
Re-visit, Adult Learning perhaps with pre-requisites (English, Maths and or ECDL)		Aqua Payments tracking database	Cyber centres supporting move to more formal learning @ cost of £200,000 (£160,000 requested)
Est on going revenue £527,020 Est income @£10/mth between £300,000 and £210,000 Where will the missing £227,020 - £317,020 come from?			
Exit Strategy:			
<ul style="list-style-type: none"> • Communication Strategy 			
<ul style="list-style-type: none"> • Sustainable technical platform 	<p>Issues on going with Gaia</p> <p>Wireless network downtime 1 mth</p> <p>Wireless failure resulted in eqpt replacement costing 8.5k</p>		Replace current wireless network with modern 100mbs wireless network @ cost of £716,300

Deloitte Recommendations	Link21CT Highlight Report	Link21CT Project Documentation	Project Variation
<ul style="list-style-type: none">• Sustainable support model	Warranties extended		

Annex 3: Risks

Risk ID	Risk Status	Risk Category	There is a risk that....	...because...	...leading to...	Impact	Initial Likelihood	Mitigating / Contingent Actions	Target Action Date
PH3_R_001	Open	Physical	The CiTH project may not be in a position to support all the pupils on the project with internet connectivity?	Some schools within Aston have a large number of pupils living outside of the B6 area	difficulties in supplying access to the wireless network service	High	Significant	It is proposed that for those pupils living outside B6 the families will be offered a computer with ADSL connection at no charge. A proportion of families will then be expected to source their own internet supplier. A fund will be available for support for those families who are unable to meet the sourcing costs. Access to the computer would be linked	Ongoing

Risk ID	Risk Status	Risk Category	There is a risk that....	...because...	...leading to...	Impact	Initial Likelihood	Mitigating / Contingent Actions	Target Action Date
								to a training agreement	
PH3_R_002	Open	Environmental	It may be geographically impossible to get wireless connectivity to all the homes within the B6 area.	the general landscape can presents obstacles to obstruct the line of sight required for the internet access. Eg. Trees in the way, homes not facing directly towards access points, poor access to high rise points on the property (eg.	difficulties in supplying access to the wireless network service	Significant	Medium	A full wireless survey of the Aston area will most likely reveal routes by which the wireless signal can be transmitted to the geographical 'holes'. For the impossible sites Virgin or ADSL will be considered.	Ongoing

Risk ID	Risk Status	Risk Category	There is a risk that....	...because...	...leading to...	Impact	Initial Likelihood	Mitigating / Contingent Actions	Target Action Date
				Maisonnettes)					
PH3_R_003	Closed	Political	The Virgin lines for pupils outside of B6 might not be renewed after the first year by Virgin	This was not an initial agreement when Virgin made the 12month offer	no internet access for residents who have these Virgin lines after 12months	Low	Low	Virgin has expressed an interest in continuing their offer. This will be negotiated in the coming year. Alternatively the UHA project is extending the wireless model over the rest of Birmingham so these pupils might be able to get internet access via this route.	Ongoing

Risk ID	Risk Status	Risk Category	There is a risk that....	...because...	...leading to...	Impact	Initial Likelihood	Mitigating / Contingent Actions	Target Action Date
PH3_R_004	Open	Techological	Wireless interference might compromise the quality of service in some areas.	Many home wireless networks transmit on 2.4Ghz which is the same frequency as some of the access pointsa in the AP network	interference of the internet signal and poor connectivity to the designated access point for the repeatit device	Significant	Medium	Phase 2 experienced wireless interference as more homes created their own wireless networks. To solve this Phase 3 and some Phase 2 aerials will be changed to broadcast and accept wireless at a higher wavelength than that used in home wireless systems. This will future-proof the network.	Ongoing

Risk ID	Risk Status	Risk Category	There is a risk that....	...because...	...leading to...	Impact	Initial Likelihood	Mitigating / Contingent Actions	Target Action Date
PH3_R_005	Open	Financial	Sustainability funding might not be achieved by the end of the project.	of Limited financial management of residents payments and control over project processes	a non sustainable project	High	Low	In Phase 2 the project worked with the e-Learning Foundation to establish an improved financial model for handling payments. This should mean that we will reach a sustainable income by 2011. User expectations managed	Ongoing
PH3_R_006	Open	Physical	Demolition of different tall buildings within the area resulting in the loss of broadcast sites.	Local area action plan	limiting the amount of tall buildings available in the AP area to install directional	High	High	A full wireless survey of Aston will be carried out to identify alternative sites.	Ongoing

Risk ID	Risk Status	Risk Category	There is a risk that....	...because...	...leading to...	Impact	Initial Likelihood	Mitigating / Contingent Actions	Target Action Date
					antennae for wireless home access				
PH3_R_007	Open	Techological	Schools do not fully commit to the ICT project	because of ICT infrastructure inadequacies.	limited technology development and support for children at the schools	Significant	Medium	The project find ways to support ICT infrastructure development after a SLA between the school and the CiTH project has been created. This would be linked to match funding. The project should support the release of teachers and professional development related to the project	Ongoing

Risk ID	Risk Status	Risk Category	There is a risk that....	...because...	...leading to...	Impact	Initial Likelihood	Mitigating / Contingent Actions	Target Action Date
PH3_R_008	Open	Legal	Concern that there is not a full auditable trail of payments made by households to the project.	Schools need to record all payments against householders centrally to the project	Future sustainability, inaccurate accountability which would not stand upto an audit or scrutiny.	High	High	Mike Farmer has requested a meeting with E-learning accountant to confirm total amount of payments received to date. Aqua Database training for tracking payments arranged for schools 16/10/09.	Ongoing

Annex 4: Works Cited

Advantage West Midlands. (2003). *Digital West Midlands*. Birmingham: Advantage West Midlands.

BECTA. (2007, December 17). *Becta Local Authorities*. Retrieved October 2009, 2009, from BECTA: http://localauthorities.becta.org.uk/index.php?section=esf&catcode=la_es_05&rid=14591

BECTA. (2008, March 13). *Becta Schools*. Retrieved October 18, 2009, from DECTA: http://schools.becta.org.uk/index.php?section=srf&catcode=ss_to_srf_suc_icm_03&rid=14666

Deloitte. (2008). *Aston Pride Computers in the Home Project ICT Phase 3 Commissioning report*. Birmingham.

IEEE 802.11a-1999. (2009, October 9). Retrieved October 27, 2009, from Wikipedia: <http://en.wikipedia.org/wiki/802.11a>

Murphy, R. (2009, October 2). SB wireless - Request for Proposal - Submission Instructions. Birmingham: Service Birmingham.

Office of the E-Envoy. (2003). *UK Online Annual Report*. London: Cabine Office.

Passey, D. (2005). *Aston Pride ICT Project Phase 1*. Lancaster: Lancaster University.

Tempus. (2009, March 20). *New Deal for Communities A proposal*. Birmingham.