



DORSET
Local Enterprise Partnership

Network Infrastructure

End of Project Report

31st March 2022

PROJECT SUMMARY

- *Purchase and installation of:*
 - 4 wireless LAN controllers
 - 2 Firewalls
 - 4 Data Centre Switches
 - 2 Core switches
- *Replaced aging hardware which restricted connectivity.*
- *Improved bandwidth and connectivity between user devices and network resources.*
- *Improved security and connectivity between external hosts and onsite resources.*
- *Improved monitoring, protection and mitigation against cyber-security attacks.*
- *Allows BPC to provide students, apprentices and staff with access to a wireless network which adheres to enhanced wireless standards, improved wireless security and performance.*
- *Allows BPC to provide students, apprentices and staff with an enhanced BYOD service to encourage them to use of their own devices whilst at BPC. This will reduce the long-term dependency on continuous capital investment in BPC owned workstations.*
- *Allows BPC to develop and improve the delivery of online teaching and learning to students using wireless devices which will contribute toward their employability and productivity.*

Project start date	9th October 2020
Project construction start date	Not applicable
Project completion date	31st March 2022

CHANGE REQUEST

- *Dorset LEP Project Budget change – 14th May 2021*
- *Planned end date extended from 30th November 2021 to 31st March 2022 – 3rd September 2021*

OUTPUTS AND OUTCOMES:

OUTPUTS

The project purchased 4 Wireless LAN Controllers, 2 Firewalls, 4 Data centre switches, Site based core switches and associated Professional Services. These were delivered between May and August 2021 and installed by September 2021. At the outset of the project BPC identified a risk that the Global pandemic could affect the supply chain. There were some delays in obtaining the hardware due to the global microchip shortage and we are still awaiting the delivery of the Wireless Access Points due to specific shortages of wireless and bluetooth microchips.

OUTCOMES

The agreed outcomes forecast that, following completion of this project, the following outcomes will be realised:

- *9,900 students and over 600 staff will benefit from the Network Infrastructure project per annum.*

<i>Student Cohort</i>	<i>Students</i>
<i>16-18 students</i>	<i>3,000</i>
<i>Apprentices</i>	<i>2,300</i>
<i>HE Students</i>	<i>300</i>
<i>Adult Students</i>	<i>2,500</i>
<i>Full Cost Students</i>	<i>1,800</i>

- *Improved bandwidth and connectivity between user devices and network resources.*
- *Improved security and connectivity between external hosts and onsite resources.*
- *Improved monitoring, protection and mitigation against cyber-security attacks.*
- *Allowed BPC to provide students, apprentices and staff with access to a wireless network which adheres to enhanced wireless standards, improved wireless security and performance.*
- *Allowed BPC to provide students, apprentices and staff with an enhanced BYOD service to encourage them to use of their own devices whilst at BPC. This will reduce the long-term dependency on continuous capital investment in BPC owned workstations.*
- *Allowed BPC to develop and improve the delivery of online teaching and learning to students using wireless devices which will contribute toward their employability and productivity.*

The infrastructure has been installed and Students and staff are now able to use the equipment. 14,265 students, apprentices and staff have connected their own devices to the wireless BYOD network since September 2021, however due to the awaited WAPs they have not benefitted from enhanced bandwidth and security features which they will do once we have received and installed them.

The College worked with Dorset LEP to produce a press release which referenced this project which was released at the project initiation stage.

BPC prepared a promotional video statement from our Principal which was been shared with the LEP for use in social media campaigns.

BENEFITS REALISED TO DATE

- *The introduction of these network resources, and the associated improvements in performance, will not only improve the quality of students and staff work, but also their experience and will contribute toward their employability and productivity.*

FINANCES

- *The original budget awarded was £689,600, this was reduced to £682,704 in May 2021 and the actual spend was £686,990.*
- *There was no additional matched funding from other sources.*

LESSONS LEARNT

- *The project was delivered within budget.*
- *The Core network elements were installed and configured, with supporting professional services, ready for the start of the 2021/22 academic year.*
- *At the outset of the project we identified a risk that the Global pandemic could affect the supply chain. There were some delays in obtaining the hardware due to the global microchip shortage and we are still awaiting the delivery of the Wireless Access Points due to specific shortages of wireless and Bluetooth microchips.*
- *With the benefit of hindsight BPC could have made further enquiries with the manufacturer regarding the wireless access points to confirm availability. That said we do not believe that we could have envisaged the ongoing global implications to the*

supply chain. In future we will work with suppliers and manufacturers to get some assurances before orders are committed.

- As the expected delivery dates for this hardware were extended, BPC considered cancellation of this order and placing an order with an alternative supplier. We did not believe that there were any benefits in taking this action as an alternative manufacturer would likely have the same supply issues and that we would lose the harmonisation with the remaining network.
- The risk register for this project included:
 - Fluctuations in exchange rates - at the time of procurement there were no adverse fluctuations.
 - Supply chain risk due to COVID 19 – there were some delays in the delivery of some hardware components due to the global microchip shortage as a result of the global pandemic. This has particularly affected the availability of wireless and Bluetooth microchips which means we are still awaiting delivery of the Wireless Access Points.
 - Robust installation process - Our own experienced in-house resources and the engagement with the supplier's contractors ensured a timely installation.
 - Availability of technical support staff due to Covid-19 closure or isolation - during the installation phase BPC and the supplier were able to allocate sufficient resources to complete the installation and configuration phases as planned.

SUCCESS STORY

- The replacement of this equipment has already realised an improved service for our students, apprentices and staff. The provision of these resources has:
 - Improved bandwidth and connectivity between user devices and network resources.
 - *Improved security and connectivity between external hosts and onsite resources.*
 - *Improved monitoring, mitigation and protection against cyber-security attacks.*
 - Enabled some 14,265 students, apprentices and staff to connect their own devices to the BYOD network since September 2021.

It also provides a firm platform to develop network services and performance further in the future, allowing BPC to:

- Provide students, apprentices and staff with access to a wireless network which adheres to enhanced wireless standards, improved wireless security and performance.
- Provide students, apprentices and staff with an enhanced BYOD service to encourage them to use of their own devices whilst at BPC. This will reduce the long-term dependency on continuous capital investment in BPC owned workstations.
- Develop and improve the delivery of online teaching and learning to students using wireless devices which will contribute toward their employability and productivity.
- Deliver network services and innovations in the future.

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