

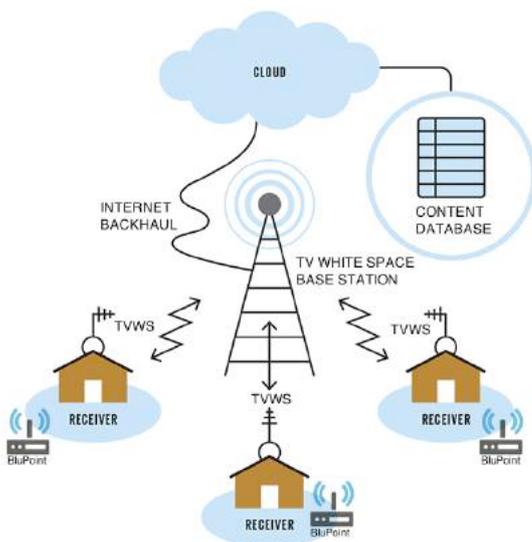
## Case study: Community information in 6 rural Zambian villages Enabling digital in non-digital environments

### Overview

The iAfrica Foundation and Connect Africa are utilising new technologies, connectivity and the know-how of local entrepreneurs to transform the lives of people in rural and remote communities across Africa. As most people living in rural African communities do not have access to a smartphone, tablet or computer, a 6-month project to pilot BluPoint, an offline content solution has been undertaken. This will investigate BluPoint's ability to deliver content to various types of devices including feature phones and basic phones with FM radio. The content which is updated periodically covers agriculture, education, healthcare, sports, news and religious material.

The Zambian pilot is running in Mwandi Village, a 3-hour, 120km drive from Livingstone, on the banks of the Zambezi River, close to Namibia and Botswana. It is home to the Lozi people who have their own language and are mostly subsistence farmers, growing or fishing just enough to survive on.

The pilot project has deployed BluPoint into 6 rural locations in and around the Mwandi District, where Connect Africa has built Smart Centres providing connectivity for computers and smart devices. The connectivity is made possible using TV White Space as the means of connecting to the wider Internet. BluPoint can utilise this connectivity to perform overnight updates on the content which is then freely available to the community. The project will also explore future sustainable business models that catalyses the local ecosystem with a combination of free and paid for resources or services for the benefit of local digital entrepreneurs.



### BluPoint key benefits

- ✓ Fast and free for users
- ✓ Content to any device
- ✓ Secure walled garden
- ✓ Easy to deploy & resilient
- ✓ Focused up to date content
- ✓ Low power / solar powered
- ✓ Simple to use
- ✓ Works without Internet for accessing cached content

### About TVWS

TV White Space (TVWS) wireless technology repurposes unused spectrums that has been allocated to TV broadcasters. The TVWS database determines, in real-time, which channels and transmitter powers may be used by secondary users without interfering with the licensed TV broadcasts.

TVWS technology is an attractive wireless technology for creating relatively low-cost connectivity at speeds of 20Mb/s at distances of up to 10km. Importantly, it is not as dependent upon line of sight connectivity as compared with other point-to-point connectivity solutions.

### iAfrica Foundation

The iAfrica Foundation was set up in 2015 to catalyse sustainable technology solutions that can transform education, health and livelihood standards in Zambia and across Sub-Saharan Africa.

### Connect Africa

Connect Africa promotes entrepreneurship, bringing communication, business and public services to rural Zambia. By providing a sustainable ICT infrastructure and affordable access to ICT services they partner with local entrepreneurs to deliver these services, creating employment and economic opportunity.

*“BluPoint’s ‘smart intranet’ technology could transform the delivery of services in support of education, health, small-scale farming and e-commerce, as well as the delivery of media content.”*

*Ian Braid, Connect Africa.*





## Life changing access to information

PROBLEM	BLUPOINT SOLUTION
<p><b>High Running Costs</b> Allowing 'live' Internet connectivity has not been sustainable due to the high cost of data and the increasing demand for connectivity by the communities.</p>	<p><b>Cost effective connectivity</b> 'Download once &amp; store locally' means that every user's interaction with the content on BluPoint is then at zero data cost. By updating BluPoint daily with content, Connect Africa can provide users access to focused digital content and control associated airtime expenditure.</p>
<p><b>Challenging Environment</b> Rural communities often suffer with both poor service provision and the lack of funds to pay for the services. This can lead to intermittent connectivity and intermittent access to important information.</p>	<p><b>Building resilience</b> By locally caching the information needed by the community the BluPoint hubs provide constant availability to the digital materials. With a 12-hour battery back-up the BluPoint platform provides the highest availability level in the most challenging of situations. The hubs are always on and the information always available at zero cost to the end user.</p>
<p><b>Scaling to whole community use</b> A 3G modem was used to test the TVWS / microwave network which provides Internet connectivity to the remote schools &amp; communities. However, the limited Internet speed and cost of airtime/data credit limit the impact.</p>	<p><b>Synchronised offline content solution</b> Each community now enjoys reliable access to the locally stored information and the speed of delivery is over 50 times faster. All user interactions are fast and free-at-the-point-of-use, even for multimedia. New content is download overnight and then accessed locally with no additional airtime cost to the project.</p>
<p><b>Wi-Fi only</b> The majority of people in rural communities have access to a mobile phone, but over 75% of the devices are not-smart. This excludes the majority of people from accessing the content.</p>	<p><b>Meaningful content to any device</b> All the content that is cached on BluPoint through the content management system is automatically adapted to enable access by smart and non-smart devices alike, on the devices people already own and are digitally literate with. On-demand and scheduled broadcasting of the appropriate content can occur over short range FM radio, Bluetooth and Wi-Fi.</p>
<p><b>Infrastructure costs are high</b> Providing communities with connectivity services at purpose built Smart Centres is expensive in both capital and running costs.</p>	<p><b>Scalable and sustainable</b> BluPoint multiplies the impact of infrastructure investments by providing access to information services to all the community. The flexibility of the system allows for the information services to become portable, increasing the reach of impact. Extending the geographical range is easy too - just add another hub or install an external antenna.</p>
<p><b>How effective are we?</b> Obtaining impact metrics and feedback from the communities takes a long time and is expensive.</p>	<p><b>Visibility on usage and feedback</b> BluPoint automatically provides rich data on usage of the system, content accessed and any feedback from the users. This provides a cost effective and fast means of monitoring and evaluating the desired impact, enabling the best chance of a successful project outcome.</p>

## About BluPoint Ltd.

BluPoint is a limited company headquartered in the UK, which advocates empowering the devices people already own to provide equitable access to digital content even in areas constrained by electrical and Internet provision.

The BluPoint technology delivers cached, curated digital content to all mobile devices, including low cost feature and basic phones at high speeds and with zero cost to the end user. BluPoint works where there is no reliable electricity supply or network connectivity. The platform combines cloud software with on the ground hubs which enables content to be edited and added to the curated artefacts. The system then optimises and adapts the content to make it accessible to all devices (e.g. it automatically creates an audio file of textual content for FM broadcast and automatically creates a video which can be broadcast via Bluetooth to low end devices). The content is then synchronised onto ground based low energy/solar powered hubs, which provide the information and services via Wi-Fi, Bluetooth and FM radio.

It is the vision of BluPoint to positively impact the lives of 20 million people in 20,000 communities by 2020.

For more information, visit us at [www.blupoint.org](http://www.blupoint.org)

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