Crickhowell
Digital Place Plan

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1 What is a Smart Town?

Smart Towns actively embrace new technologies to achieve economic, social and environmental benefits such as increased footfall and growth in spending, improved traffic management, energy saving, cleaner safer streets, and increased public involvement.

Smart Towns adopt the same technology and data that national brands have been using for decades to enable small businesses and town centres to compete on an equal footing. Smart Towns also help with 'levelling -up' so that every business and organisation within a town has access to the same information they need to grow their businesses and the town centre as a whole.

And it is not necessary to be an expert or enthusiast for technology to take advantage of smart technology and data. People and places just need to be open to using new methods alongside digital skills training and business support to enable people to get the most out of digital.

A glossary can be found at the back of the Plan which explains the technical terms used in this document.

Recent research shows that around 70% of consumers spend up to 3-hours a day scrolling on social media. When you couple this with the fact more and more people are keen to support their local high street businesses, it stands to reason that connecting local people from the digital world to the physical world is the solution to increasing high street footfall and sales.[1]

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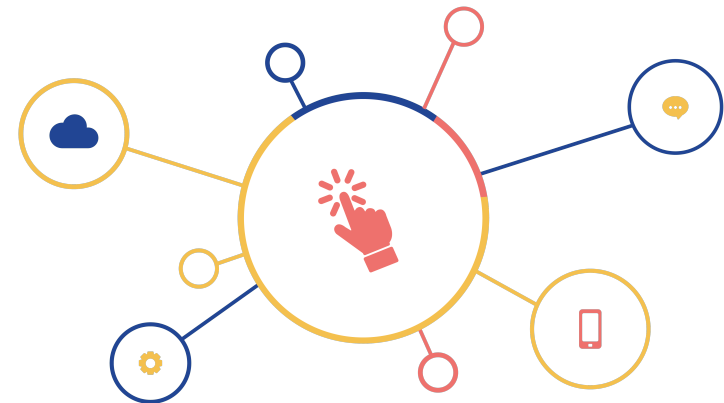
[1] Polly Barnfield OBE, CEO of Maybe* Tech.

1.0 Why have a Digital Place Plan?

The idea of town centres having their own Digital Place Plan (the Plan) is a recent idea, being delivered through 'The Year of SMART Towns'. For most towns it is likely to be something new and unfamiliar. However, for towns that wish to become smarter and more digitally confident, there are potential resources available including from Local Authorities and the Welsh Government's Transforming Towns programme.

Preparing a Plan will help to boost interest, understanding and support for digital technologies and the use of sensors to improve the performance of a town centre. And the process of preparing a Plan will encourage new action in support of existing town centre regeneration plans.

1.1 A Plan is based on 5 key stages:

1 **Strategic digital review**
This identifies the digital priorities being set at county, regional and national levels through programmes, planned infrastructure and investments. The purpose is to ensure the Plan is in line with these priorities to maximise the level of support.

2 **Plans and partnerships**
By researching existing plans and reviewing examples of partnership working within the town, this stage identifies the vision for the town centre, along with the level of ambition required and how digital might help to achieve it.

3 **Digital place assessment**
The place assessment identifies how advanced a town is along their Smart Town journey. This is done by identifying the current infrastructure and how it is being used. The assessment is crucial for understanding what the town is already doing well and where it has the opportunity to digitally improve.

4 **Business and stakeholder views**
Once the Plan has developed a comprehensive understanding of where the town is along its digital journey, businesses and other stakeholders meet to identify the direction and actions recommended in the Action Plan.

5 **Action plan**
The final step of the process is to draft an Action Plan that identifies the most impactful (and feasible) actions that can be taken to become a digitally smarter town in the near-term (e.g. next 2 years).

2   Town centre characteristics

Crickhowell is a vibrant market town located in the Brecon Beacons National Park with a compact town centre almost exclusively occupied by independent local businesses. The town is one of the main shopping destinations in the National Park, this is reflected in its thriving town centre which won the UK-wide Great British High Street Award in 2018 and has a very low vacancy rate.

Crickhowell is identified as a 'Key Settlement' in the National Park and provides a broad range of facilities and services associated with a traditional town centre, serving both its resident population and surrounding settlements. The town is located on the A40, 6 miles north west of Abergavenny, the nearest large town, and 15 miles to the south west of Brecon. The population of the town (not including the nearby village of Llangattock) is approximately 2,000 – similar to other market towns in mid Wales, such as Hay-on-Wye.

The town's rural location in the National Park and on the long-distance Beacons Way walking route attracts a large number of visitors, with visitor numbers at their highest in the summer. The town is known as a base for tourism due to its location in the Brecon Beacon National Park and has gained a reputation for its independent sector and boutique offer, reflecting the important role of tourism and visitor economy in the local area. However, this is also felt by some to be connected with insufficient parking for residents, workers and visitors, particularly at peak times.

In 2018, 42 retail and commercial units were recorded in Crickhowell, Boots is the only national multiple in the town, although there are plans for a Co-op supermarket in the former Conservative club.

Figure 1 Crickhowell town centre, as defined in the Brecon Beacons National Park Local Development Plan
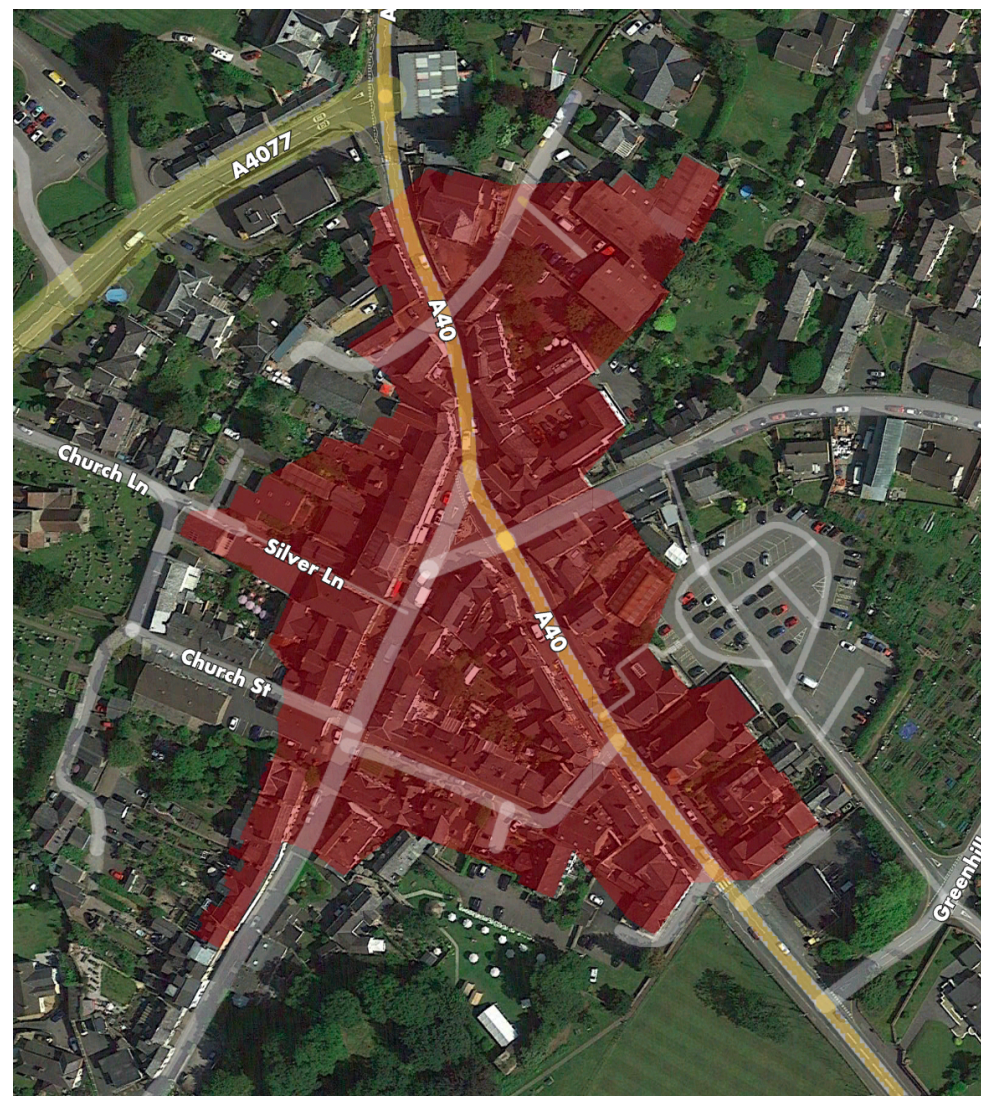
Retailers in the town include a butchers, bookshop, bakery, outdoors shop, florist, clothes shops, zero-waste shop (first of its kind in Wales), antiques shop as well as two department stores and chemists. The town's retail catchment is limited by Brecon and Abergavenny. Beyond retail there are a number of estate agents, food and drink establishments (many of which utilise local produce) including restaurants, cafes and public houses, as well as accommodation businesses in the town and surrounding area.

The population of the town is predicted to grow modestly. A number of important services are located in the town including a library, Parish Hall, County Council offices, community event spaces, churches, gallery, GP, fire station and police station. Crickhowell Resource and Information Centre is located on Beaufort Street and functions as a Tourism Information Centre as well as a local community hub. There are also a significant number of residential dwellings both within and adjacent to the town centre.

Place Activation

The largest events held in the town are the Crickhowell Walking Festival (in March) and the Crickhowell Literary Festival (in October). Both events are held annually across multiple days and utilise a range of venues in the town centre, which drives an uptick in footfall and visitor numbers.

The largest event held near the town is the Green Man Festival, Wales' largest music festival, which has been held annually in the nearby Glanusk Estate since 2006. The Festival attracts around 25,000 people and has a significant impact on the town and its economy, with a large number of visitors to the town around the time of the Festival.

2.0   Where could digital support the town centre?

Measure and manage town centre parking to identify long-term solutions and reduce the scale of the issue

Enable existing companies to grow and new businesses to open in the town

Support existing festival and events as well as attract new events to the town

Manage and promote the town's heritage, an important part of the town's fabric

Public and community service delivery in the town

Measure footfall and mobility within the town centre

Manage the town's visitor economy

3 Strategic digital review

This section reviews digital programmes, planned infrastructure and investments at both the local authority and regional level. The purpose is to ensure that the Plan aligns with strategic priorities and to facilitate dialogue around the SMART agenda on a local and regional level.

3.0 What are the strategies?

- Welsh Government's **Digital Strategy for Wales**

- Mid Wales Growth Deal's **Vision for Growing Mid Wales**

- Powys County Council's **Digital Powys 2019 – 2025: A digital transformation strategy**

There is support for the use of digital technology and data from the national to the county level. All of the strategies contain an emphasis on digital and enabling digital change at all levels of governance and recognise its transformative potential for small businesses.

With the national, regional and county level strategies and plans in place, there is a defined, supportive framework in place for a local digital plan for Crickhowell.

3.1 What new funding and investment is there?

There is new funding and investment in digital from both the private sector and the County Council.

Beacons Telecoms, based on the Glanusk Estate, is planning on upgrading the town's fibre broadband network. Crickhowell currently has a superfast fibre network, operated by Openreach, that uses fibre cable to the cabinet and copper cable from the cabinet to the premises (FTTC) to provide an internet connection.

Beacons Telecoms are planning to install a new fibre broadband network in Crickhowell, which will use a fibre cable the entire way from the local exchange to the premise (FTTP) to provide **ultrafast fibre broadband**. The new FTTP network will increase download speeds in Crickhowell from their current level of around 60 – 70 Mbps to up to 1,000 Mbps.

Openreach are planning to upgrade the existing network in the town to provide **ultrafast fibre broadband** by December 2026, a map of Openreach's roll out in the region can be seen below.

Crickhowell is also part of Powys County Council's **town Wi-Fi** programme, meaning it will be part of the next set of towns to have Wi-Fi units installed in the town centre. The units provide free public Wi-Fi and smart footfall data, including:

- Number of visitors to the town centre (i.e. footfall)

- Dwell time of visitors

- Busyness of different areas of the town centre

- Frequency of visits

These analytics can be used by local businesses and decision-makers as has been done in other successful Smart Towns, such as Cardigan, and potential uses for a smart footfall network of this nature in Crickhowell are detailed in Sections 6 and 7 of the Plan.

Powys County Council have also made significant investments in **LoRaWAN**, a technology that enables the use of large numbers of low-cost sensors, installing LoRa gateways across the county. LoRa sensors can be used for a wide variety of purposes, ranging from monitoring the occupancy of parking spaces to measuring soil moisture and air quality.

A LoRa sensor connects to a LoRa gateway which in turn connects to the internet. A single LoRa gateway can support thousands of sensors making it an integral part of the network and crucial for enabling the use of low-cost sensors in towns like Crickhowell. Powys County Council have installed LoRa gateways at more than 60 sites across the county, however, there is currently no LoRa gateway in Crickhowell.

3.2 What business support is there?

The **Powys Digital Towns Project** is an ongoing programme of business support commissioned by Powys County Council. The programme of support is designed to support businesses to exploit **town Wi-Fi** and other digital opportunities in their local area. The programme is being delivered through workshops and webinars with businesses also being provided access to an online hub of resources.

Business Wales provides business support which covers a wide range of areas (such as marketing) alongside digital-specific support for businesses through **Superfast Business Wales.**

Figure 2: Map of Openreach's ultrafast broadband rollout in the region
Source: Openreach
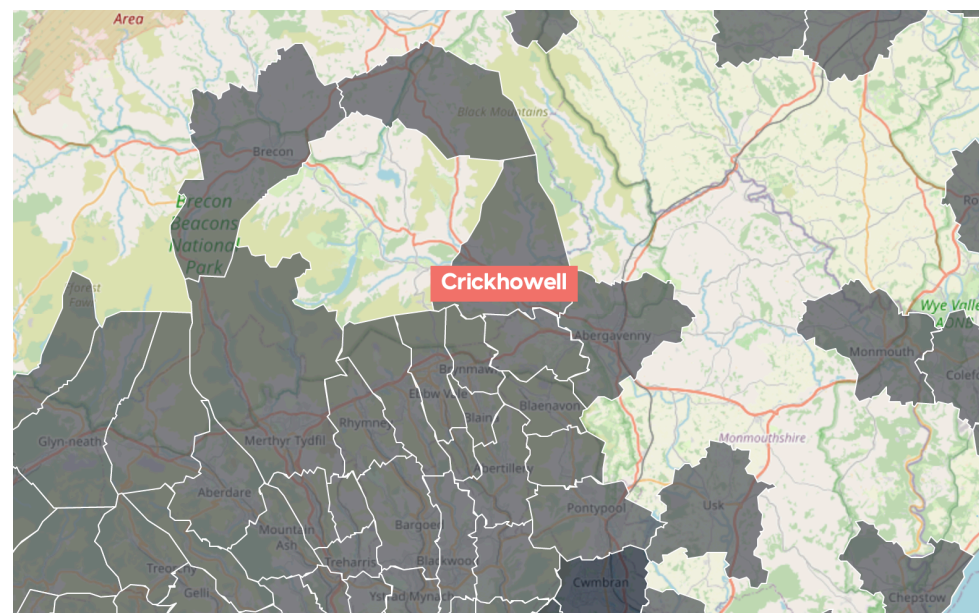
Key:
▓ To be built between April 2021 and December 2026
■ To be built between April 2021 and April 2024

Both services include general resources covering a wide range of topics as well as personalised 1-to-1 training. A key part of the services are to signpost businesses to other relevant Welsh Government resources and services, such as **Superfast Cymru** and **Social Business Wales**.

3.3 What are the strategic opportunities for the town centre?

Plans for an **ultrafast fibre broadband** network and a **town Wi-Fi** network (which would provide smart footfall data), represent significant investments in digital and Crickhowell as a whole.

The key strategic opportunity for Crickhowell is the development of its digital infrastructure to ensure that all the key pieces of infrastructure and technology are in place. At present, there is no smart footfall network or LoRa gateway in place. The installation of both pieces of infrastructure in the town would represent important steps in the town's Smart Town journey and bolster the town's digital capabilities, helping to futureproof Crickhowell.

There is a clear strategic framework that can support the town to take these steps and is linked with a number of funds on the national and regional level, including the Welsh Government's **Transforming Towns** programme and the UK Government's **Shared Prosperity Fund**.

Summary of strategic review

Strategic plans supporting digital	Strong support for digital across all sectors and at all levels of governance, as reflected in the County Council, Mid Wales Growth Deal and the Welsh Government's plans and strategies.	✓
Funding available	The Welsh Government's **Transforming Towns** programme and the UK Government's **Shared Prosperity Fund** are available to support local digital initiatives.	✓
Investment in infrastructure	Beacons Telecoms is planning to install an **ultrafast fibre broadband** network and plans for a **town Wi-Fi** network, but there is scope for further investment with no LoRa gateway in place.	−
Business support	The **Powys Digital Towns** Project is providing digital skills training for businesses in the county and Superfast Business Wales provides comprehensive digital support alongside digital marketing support from Business Wales.	✓

4 Plans and partnerships

4.0 Are there plans or a vision for the town centre that a Digital Place Plan can support?

Crickhowell Community Plan – 2017

The **Community Plan** is Supplementary Planning Guidance that informs future development, sets a vision for the town (see Figure 3) and identifies the town's priorities. The Community Plan is split across five sections, with each section including a set of aims and actions:

1. Community
2. Economic Development
3. Environment
4. Parking
5. Housing

Community focuses on retaining community facilities and local public services, particularly those for older citizens (of which there are a high number in Crickhowell). The Housing section is similarly community-oriented, recognising the need for the Town Council to support the delivery of affordable housing as well as the development of an 'empty homes strategy'.

Across each section there are a number of areas that a Digital Place Plan could support, however, the areas where a Digital Place Plan could have the greatest impact are **economic development**, **parking** and **environment.**

Figure 3: Extracts from the Crickhowell 15 Year Vision
Source: Crickhowell Community Plan

Crickhowell will continue to thrive as an important centre for those living and working within the eastern area of the National Park. The strong sense of place engendered from its position within stunning scenery, combined with the important cultural and historic heritage of the area will continue to shape and mould the growth of the town.

The town centre will grow as a vibrant destination where people will choose to come on holiday to experience the atmosphere of a bustling rural market town with a range of independent specialist retailers and restaurants capitalising on the abundance of quality locally produced food stuffs.

In the **Economic Development** section, the need to diversify the local economy is identified, specifically by attracting small and medium size enterprises in clean, high-tech industries. Digital infrastructure of a suitable quality is critical to attracting businesses of this nature. Sustainable economic development is a key issue for successful towns like Crickhowell, which have minimal space to grow and, in Crickhowell's case, need to preserve the town's built heritage.

A series of actions that need to be taken to promote sustainable economic development are set out in the **Community Plan**, including: *"Ensure that the technology infrastructure is available to enable business expansion/ development."* This suggests that digital technology and a wider Digital Place Plan have a clear role in supporting sustainable economic development in the town.

Parking is a key strand of the **Community Plan** and appears in multiple sections. Of residents surveyed for the Community Plan, slightly more than 95% felt that parking in Crickhowell was an issue, and a majority favoured funding a parking consultant.

There is no plan for addressing the issue and little data around parking patterns in Crickhowell currently being collected. This suggests there may be an opportunity to utilise technology to collect data around parking in the town centre and Beaufort Street Car Park, to provide the basis for a data-driven plan to tackle the issue.

Under **Environment**, a wide range of themes and actions are discussed, including dog fouling, active travel, public transport, community energy and planting. There is clear scope to support the town with a number of these actions with low-cost LoRa sensors that can help the town set goals and monitor its progress in this area. For example, planting can be supported with soil and air quality sensors that measure plant health, reducing the time needed to maintain the plants as well as any potential waste (e.g. excess water and emissions).

4.1   Is there a town centre partnership or forum?

The capacity for digital to help drive forward town centre regeneration and place management is influenced by the level of cross organisation partnership working and how a town centre already involves a range of stakeholders.

Who are the main representative groups and town centre organisations?

- Powys County Council
- Crickhowell Town Council
- Crickhowell Resource and Information Centre (CRiC)
- Crickhowell Corn Exchange

CRiC is both a business organisation which represents a number of town centre businesses as well as a community organisation, with a responsibility to provide community IT services. The Crickhowell and Black Mountains Tourism Group which represents local businesses in the visitor economy is part of CRiC and the group also runs the town's visitor destination website [www.visitcrickhowell.wales.](www.visitcrickhowell.wales)

Are there any meetings, partnerships or forums that are focused on the high street/town centre?

There are no formal partnerships in place. However, as a smaller town, groups often work closely together and many people are members of multiple town centre organisations. As a consequence, partnership working often happens on an ad hoc and informal basis (in the absence of any formalised arrangements).

4.2   Findings

There are several active groups and organisations in the town centre and there is a plan for the town which has begun to outline the role of digital in Crickhowell. There is scope for developing this further in the Digital Place Plan by identifying specifically where and how digital technology and data can be applied to address the local issues highlighted in the **Community Plan** and the plan-making process.

5 Digital place assessment

The digital place assessment identifies where a town is located on the Smart Town journey based on what infrastructure is already in place, how it is currently being used and identifies the next steps it should take to move forward. At the beginning of this process, towns should be aiming for a minimum basic level of physical infrastructure and online presence; Stage 1 (Getting Started).

5.0 Basics building blocks

1 - Physical infrastructure:

- **Superfast or ultrafast broadband**
  Faster and more reliable broadband, for homes and businesses is key for accessing the opportunities presented by the internet, such as selling products online to a global audience.

- **4G coverage**
  Reliable and fast mobile data is key for enabling businesses and other stakeholders to get the most out of tech solutions, particularly when they are on the go.

- **Smart footfall sensors**
  Smart footfall counting units provide clear and usable information about how many people visit the town, how frequently and how long they stay. These pieces of information are vital for understanding how the town is currently functioning as well as the impact of any events and other changes on how people use the town.

- **LoRa gateway (Internet of Things)**
  LoRa gateways are critical piece of equipment which enable low-cost sensors to send information to a cloud, where it can be accessed remotely. Gateways enable towns to set up an Internet of Things network which can record a range of information that helps to manage the town. This information can range from the number of parking spaces available to remotely identifying when a bin needs emptying.

2 - Online presence:

- **Unified website**
  A unified website provides a platform for promoting businesses, launching local campaigns, promoting events and activities as well as functioning as an online visitor destination.

- **Social media**
  An active use of social media for marketing and communication in relation to the town centre. This could include using Facebook, Instagram or Twitter.

3 - Business support and skills development:

- Opportunities for businesses to receive digital skills training to better utilise digital data and tools to acquire and retain more customers

5.1　The journey

There are three key milestones on the Smart Town journey shown in Figure 4. For most towns the journey will begin somewhere between Stages O and 1 with the need to get started on putting in place some or all the essential components of a Smart Town.

As a town progresses across its journey, it is able take on larger initiatives unique to the town, its infrastructure, plans, and partnerships. Smart Towns that have been working with digital technology for some time have often only reached Stage 2 (Using).
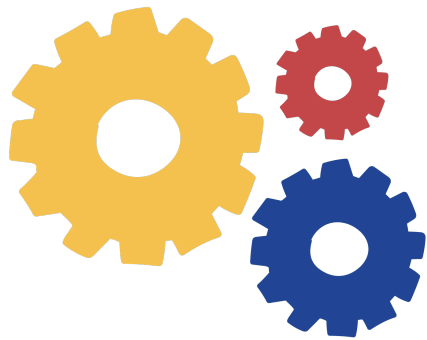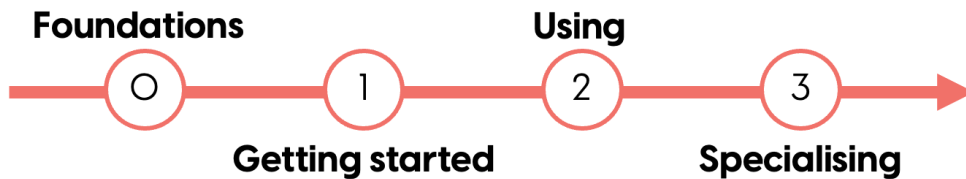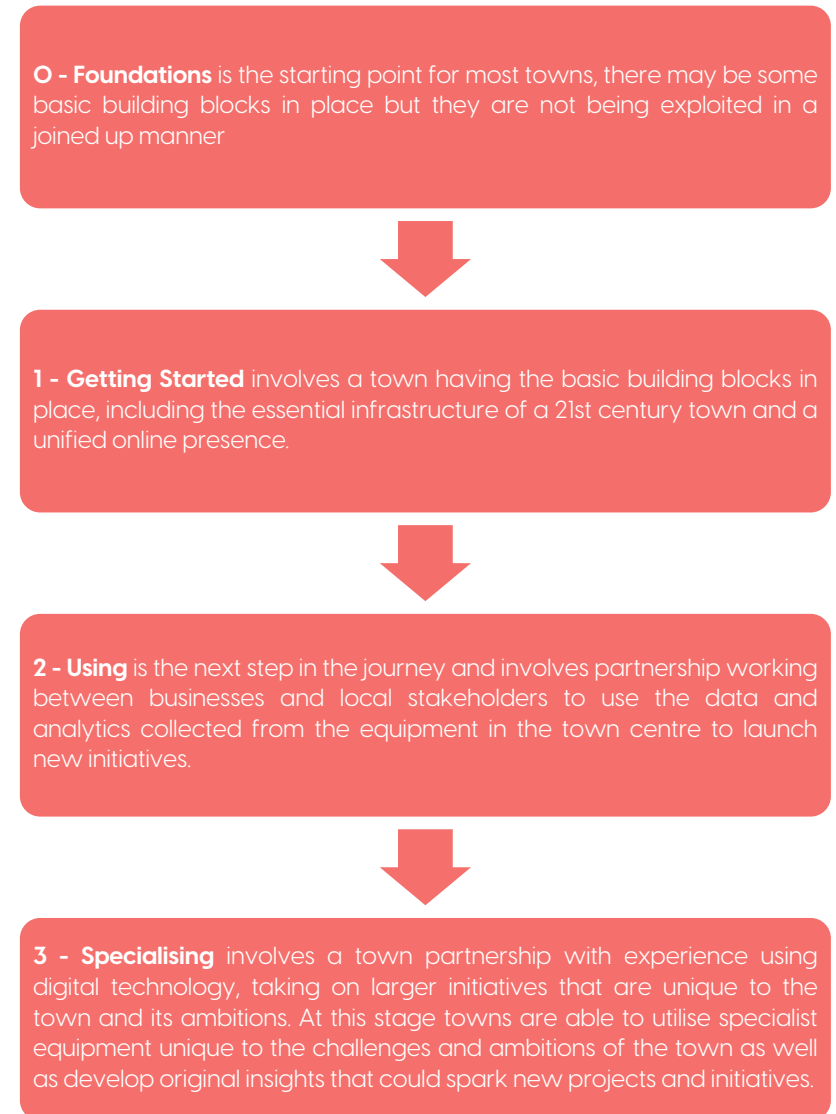
Figure 4: Journey tracker

Foundations

Using

O — 1 — 2 — 3

Getting started

Specialising

Figure 5: Smart Town journey

O - Foundations is the starting point for most towns, there may be some basic building blocks in place but they are not being exploited in a joined up manner

1 - Getting Started involves a town having the basic building blocks in place, including the essential infrastructure of a 21st century town and a unified online presence.

2 - Using is the next step in the journey and involves partnership working between businesses and local stakeholders to use the data and analytics collected from the equipment in the town centre to launch new initiatives.

3 - Specialising involves a town partnership with experience using digital technology, taking on larger initiatives that are unique to the town and its ambitions. At this stage towns are able to utilise specialist equipment unique to the challenges and ambitions of the town as well as develop original insights that could spark new projects and initiatives.

5.2 How Smart is Crickhowell?

The assessment suggests that Crickhowell is positioned between Stage 0 and 1 of its Smart Town journey.

*Figure 6: Crickhowell's position in its journey*
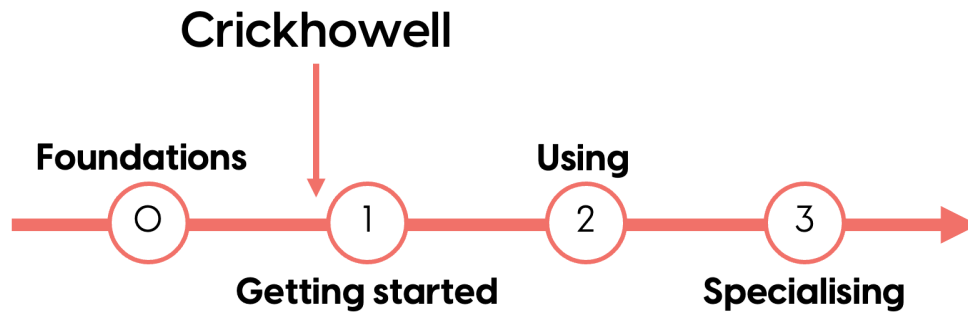
5.3 Digital infrastructure and technology in Crickhowell

Crickhowell has good quality digital infrastructure for a rural town with a number of foundational pieces of infrastructure (e.g. fibre broadband) in place. However, there are a number of missing building blocks which need to be installed, for Crickhowell to fully develop its digital capabilities and ensure that the town is in a position to thrive in the future.

The town currently has access to superfast fibre broadband and Beacons Telecoms are in the process of installing a full fibre network in the town which will provide **ultrafast fibre broadband** (FTTP). Clarence House has already been connected to the full fibre network and there are plans to connect the vast majority of residential and commercial premises in the town.

There is no 5G coverage in the town with the nearest 5G coverage in Abergavenny through the Three Network. There is also no LoRa gateway in or near the town, meaning that low-cost LoRa sensors cannot currently be used in the town.

There is evidence of some digital heritage and culture initiatives in the town centre. HistoryPoints have been installed throughout the town centre as part of the Powys War Memorials Project. HistoryPoints are a Wales-wide initiative to place QR codes at historical sites which provide concise historical information on a web page, when the QR code is scanned. This initiative represents a starting point which could be built on further, especially as the town's heritage is central to its identity and urban fabric.
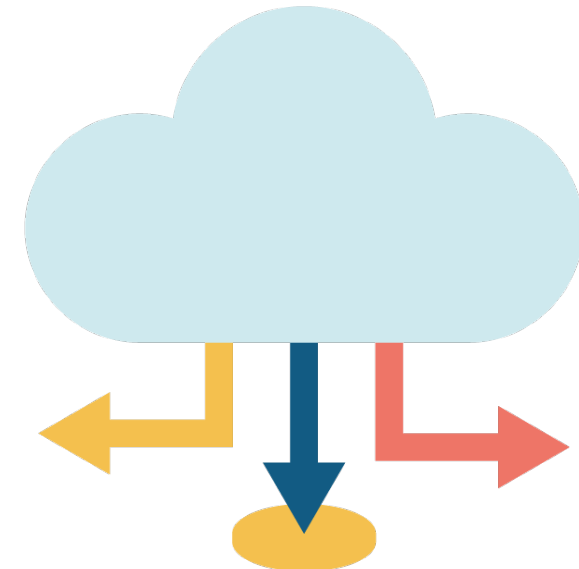
5.4   Online presence

The online presence of Crickhowell is one of its strengths, with a high number of local businesses active online and supported by a locally managed town centric website. The town has a positive online presence which reflects its key characteristics. Namely its carefully managed and busy high street, the quality of the surrounding environment and the heritage of the town centre. This is reflected in the top news articles about the town, such as '*Crickhowell town centre, where traders in the main feel they can continue to maintain their position as one of the best high streets in Britain*' (Wales Online, 2022).

Tourism is a central theme of Crickhowell's online presence, with 'Visit Crickhowell' at the top of results when searching for the town. Visit Crickhowell is a locally managed town-centric website, that provides a variety of information on where to stay, eat and shop. In addition, there is a '360° virtual tour' that features video content interviews with local businesses describing their offering. By frequently updating the website with relevant content about local shops, events and activities the website will remain a useful tool for both visitors and residents whilst ensuring that it continues to perform well in search results.

The local businesses that have the strongest overall online presence are the **Glanusk Estate** and **The Bear Hotel**, both of which have audiences of more than 10,000 followers across their respective social media accounts. Smaller enterprises such as high-street-based **Book-ish**, **Natural Weigh** and **Nicholls** are also active online. Using their social media accounts to regularly communicate with their audience and have an online shop facility to augment their physical offering via their individual websites.

Some businesses may benefit from support to advertise via social media and strengthen their search engine optimisation (i.e. improve their rankings in online searches). Businesses, such as **Nicholls**, provide a demonstration of the value in strengthening a business' online offering in conjunction with its high street presence.

5.5   Where is Crickhowell now?

Crickhowell has some of the foundational pieces of infrastructure in place (e.g. fibre broadband). A number of the basic building blocks that provide businesses and stakeholders with relevant local data about the town are missing. Installing these missing building blocks is critical to provide the town with local data that can be used to plan for the future and solve local issues.

There are no smart footfall sensors to collect data on how the town centre is being used by different types of visitors throughout the year. In addition, there is no LoRa gateway, a key piece of infrastructure that would enable the use of a large number of lows costs sensors in the town. As a result, the town is missing some of the digital infrastructure needed to make data-driven decisions about how to improve business performance and manage the town centre.

However, the town has a robust online presence, with Visit Crickhowell appearing at the top of search results and containing relevant information about events and activities happening in the town. In addition businesses have access to comprehensive support through the **Powys Digital Towns** Project and **Business Wales**' services.

Summary of Crickhowell's assessment

Plan	The **Community Plan** provides a clear vision and outlines some of the most important issues and opportunities for the town.	✓
Partnership	There is no formal partnership, however, CRiC functions as a central hub bringing together a wide range of stakeholders.	–
Physical infrastructure	**Ultrafast fibre broadband** is planned by Beacons Telecoms and Openreach but there are a number of missing building blocks, including a LoRa gateway and smart footfall network.	X
Online presence	CRiC maintains an active visitor destination website and social media channels and there are a number of businesses who actively utilise online channels.	✓
Business support and skills	**Powys Digital Towns** project has been supporting local stakeholders to engage with digital technology and data. **Business Wales** provides a wide range of support for businesses looking to utilise digital tools and platforms.	✓

6   Priorities for Crickhowell

The following section outlines the key issues raised by businesses and stakeholders during the plan-making process as well as during previous studies in Crickhowell, such as the **Community Plan**. The issues and opportunities are organised by theme, with four themes identified for Crickhowell.

6.0   Digital priorities for Crickhowell

Install missing building blocks – install a smart footfall network and LoRa gateway to enable the town centre to fully develop its digital capability.

Share smart footfall data and analytics – provide businesses and stakeholders with information about footfall, dwell time and other analytics that can help improve performance and management of the centre.

Events and festivals – use smart footfall network to provide organisers with hard evidence around footfall and visitor numbers to help attract funding, manage events and plan future events.

Parking and traffic – use parking sensors and traffic counters to monitor parking and traffic in the town centre and provide an evidence base for a dedicated plan which addresses both.

6.1   Install missing building

The key digital priority for Crickhowell is to install the building blocks which are not currently in place, namely a smart footfall network and LoRa gateway. This will provide businesses and town centre organisations with footfall and visitor data as well as enabling new approaches to town centre management that can help futureproof the town.

Smart footfall network

Businesses reported that very little data is currently collected about visitors who come to Crickhowell, including where they go within the town centre and how long they stay. As a result, there is a lack of hard data on the visitors coming to the town, a situation labelled by some as an "information deficit". However, if the data was available, businesses stated that they would look to use it to inform their operations, in particular opening hours and staffing which can be adjusted dynamically to meet demand with access to more visitor data.

This can be addressed through the installation of a smart footfall network that uses access points to measure footfall and mobility (based on smart devices) in a town centre. These units provide comprehensive smart footfall data (e.g. dwell time, number of visitors and visit frequency) which can be used by both businesses and town centre organisations.

Several businesses, already experienced in collecting their own data, have indicated a willingness to begin using the smart footfall data to complement their performance data (e.g. online versus instore sales, days of week or seasonality). Supplementing the data will support the businesses' decision-making in terms of marketing, promotion and resource allocation.

Smart footfall solutions which utilise access points can also provide free public Wi-Fi, an important amenity for Crickhowell as an important hub for tourism in the National Park. Local stakeholders stated that public Wi-Fi was also a benefit for residents and complimentary to CRiC's mission to provide community IT services for the town.

It is very important to widely distribute the data and analytics from a smart footfall network to enable local businesses and stakeholders to use it. As a result, it is recommended that Powys County Council partner with CRiC and the Town Council to establish a newsletter.

This a model which has been successfully adopted by other Smart Towns, such as Cardigan who distribute Smart Town analytics, in the form of data and graphs, to businesses, councillors, officers, the MS and MP in a monthly newsletter. A link to a dashboard where real time data can be accessed is also included. This data has already been used by cafes in Cardigan to adjust opening hours and staffing – opening later where data evidenced there is a higher level of footfall in the evening.

LoRa gateway

A LoRa gateway is the second important building block which is not currently in place in Crickhowell. The gateway itself is a relatively inexpensive piece of infrastructure, typically costing less than £2,5OO, and enables the use of thousands of low-cost LoRa sensors in the town. The installation of a LoRa gateway is a clear priority for the town as are a number of opportunities for sensor-driven solutions to local issues and gateways have been installed in most towns in Powys.

Opportunities to use LoRa sensors in Crickhowell, include:

- Monitoring and managing on-street parking with parking sensors that provide real-time data on whether parking spaces are occupied, this is detailed further in the *Parking and Traffic* priority
- Providing real-time local weather data, including temperature and humidity, in the town and local area (visitor information that can support outdoor tourism)
- Early warning of potential flooding with the installation of sensors at the River Usk and local streams which provide an automated warning based on ground saturation and monitoring water levels upstream

6.2   Events and festivals

Festivals and events play an important role in attracting a large volume of visitors to Crickhowell throughout the year. A smart footfall network can can measure visitor numbers, first time visitors and dwell times, enabling event organisers to measure the impact of their event in detail.

By comparing these metrics with a baseline, organisers are able to better understand the wider impact of their events, including on the town centre economy. Access to this information has the potential to help organisers, plan and manage their events going forward. Event organisers in other towns have also used this information to set key performance indicators (e.g. increasing visitors to the town centre by 10% during an event) as a way of attracting funding.

An example of this is Other Voices an annual music festival held in Ireland and Wales (alternating each year). Cardigan were successful in attracting the festival to the town as they were able to provide detailed feedback about the festival's impact on footfall and the town centre economy through data collected by a smart footfall system. The town was also successful in securing Welsh Government funding which was linked to a target of increasing footfall by 12%. This was measure by the town's smart footfall system and the event increased footfall by nearly 20%, securing additional funding.

This a model that may be implemented in Crickhowell following the installation of a smart footfall network and has the potential to support the growth of existing events (e.g. Crickhowell Walking Festival) whilst supporting the establishment of new events and festivals.

There is also scope to install digital signage in the town centre and at Beaufort Street Car Park, as one of the main gateways to the town. Digital signage can be used to promote upcoming and ongoing events, helping to increase awareness of the town's active event programme to both visitors and residents.

Digital signage can be used to reduce the seasonality of the town's visitor economy by promoting events being held in the autumn and winter during peak season, encouraging repeat visits during quieter months. As the signage can be updated in real-time it can be used as a modern, dynamic advertising solution for town centre businesses who can market directly to visitors as they arrive to the town.

To ensure that the signage is in keeping with the town's built heritage it may be wall-mounted and framed with suitable, local materials.

6.3 Parking and traffic

Parking and traffic are both well-recognised and long-standing issues in Crickhowell, which was reflected during engagement sessions with businesses. The consultation for the **Community Plan** found that more than 90% of residents believed that parking in the town centre was an issue. This was also reflected during discussions with local stakeholders in the production of this Plan.

There is a single car park in the town, used by both workers and visitors, and limited on street parking in the town centre – this has been further reduced by the introduction of planters on High Street during the pandemic.

Minimal data is collected around parking in Crickhowell, making it challenging to identify whether there should be change and if so, what adjustment. This suggests that there is clear scope for the use of parking sensors in the Beaufort Street Car Park as well as on-street parking in the town centre. This includes loading bays, disabled parking spaces and EV charging bays.

Parking sensors can collect a range of data including when people are parking and how long cars are parked for, enabling the development of an informed plan for addressing parking in Crickhowell. A data-driven plan of this kind could help identify areas for spill over parking (and when they are needed) as well as a solution for parking for town centre workers.

LoRa traffic counters on the main roads in the town or a more advanced urban traffic monitoring system (that can measure the type of traffic passing through the town) could also feed into a plan of this nature. Traffic sensors would provide hard evidence around traffic flow through the town's main roads at different times of the day and days of the week, supporting data-driven decision making around traffic in the town.

7   Action plan

Crickhowell is a thriving market town with a strong visitor economy and unique independent business community that has succeeded to retain the town centre's independence and focus on local produce and products. To ensure this continues, high-quality infrastructure needs to be in place and independent businesses and local organisations need to be supported. Digital has a key role to play in this.

7.0   Key projects and actions

The assessment has identified that Crickhowell is beginning at Stage 0 of its Smart Town journey (Foundations), with the aim to progress to Stage 1 (Getting started). This is possible through a small number of investments and a clear approach to exploiting new and existing digital infrastructure.

The key actions and projects required to achieve this are set out below:

Building blocks and distributing the data

1. Install a smart footfall network that covers the town centre and gateways to the town, in particular Beaufort Street Car Park
2. Embed a 'what does the data say' approach in local decision-making that uses Smart Towns analytics as an evidence base:
   o Powys County Council, CRiC and the Town Council to establish a newsletter that frequently distributes Smart Towns analytics to businesses and local organisations
   o Circulate analytics, key trends and upcoming events to businesses and organisations once a month, as a minimum, as frequency is key for exploitation

3. Explore the potential for a digital hub (e.g. Patrwm.io) for the town centre which provides a single platform for hosting and distributing Smart Towns analytics to businesses and other stakeholders
4. Install a LoRa gateway in the town centre to enable the use of sensors across the town
5. Powys County Council, CRiC and the Town Council to identify and prioritise applications for sensors to support town centre management, areas of focus may include:
   o Real-time local weather measurements
   o Flood monitoring
   o Parking and traffic monitoring and management

Events and festivals

1. Install outdoor digital signage at key gateways to the town and within the town centre to promote local events and businesses
2. Promote local events using digital signage installed at key gateways and in the town centre
3. Provide event organisers with smart footfall data to measure the impact of their events
4. Support event organisers to use the data to secure funding, plan future events and manage ongoing events

Parking and traffic

1. Install parking sensors to monitor and manage on-street parking spaces, loading bays and disabled parking spaces in the town centre
2. Explore smart parking solution for key car parks that enable visitors to see the capacity and occupancy of car parks and support parking officers to target enforcement

3. Install LoRa traffic counters or consider more advanced urban traffic monitoring systems for measuring traffic flows through the town
4. Use smart parking data from LoRa sensors and any other systems installed in the town as an evidence based for a dedicated plan to address parking and traffic

7.1 Delivery

Working with key stakeholders, the projects identified above are considered deliverable in an 18-month window. Projects will typically follow a process of funding, procurement, design, installation and exploitation – this can vary depending on the nature of the project. The following section sets out a route map for delivery based on these steps:

1) Funding (3 month)

Projects involving the purchase and installation of new infrastructure or the purchase of third-party data or solutions are likely to require new funding. At the present time, there are a number of potential sources:

Transforming Towns Placemaking Grant – Welsh Government

Local Authorities and Town Councils are eligible to apply for the Placemaking Grant under the 'Digital Towns' which supports investments in digital infrastructure and data providing there is a clear plan for its exploitation. A key consideration for funding is whether proposed schemes "demonstrate the value of data and embedding 'what does the data say' approach, ensuring it is always used as an evidence base in making strategic decisions that benefits the high street and further afield."

Shared Prosperity Fund – UK Government

Local Authorities will be able to support projects from their allocated funds that meet the following investment priorities: communities and place, supporting local businesses and people and skills. The projects featured in the Action Plan are cross-cutting with the majority addressing all three investment priorities. Specific interventions eligible for funding include those which support local digital skills or invest in digital infrastructure for local community facilities.

2) Design, procure and install (3 - 6 months)

It is likely that a specialist supplier will be required to advise on the design, installation and use of the chosen new technology. Projects involving physical infrastructure will require key stakeholders to work with specialist companies to design the necessary technical schemes and specifications, e.g. the location of sensors or digital signage. In addition, specialists are able to advise on securing the relevant permissions needed (e.g. permission from property owner), planning permission, location of utilities/connections and identify specific project risks.

3) Exploitation

Exploitation involves ensuring that all relevant stakeholders have access to the data and are aware of how it can be used. This will involve the establishment of a distribution model (e.g. newsletter or digital hub) and support to interpret and take action from the data. This is a critical step for taking full advantage and enabling businesses, organisations and stakeholders to realising the benefits from newly installed technology.

i.   Glossary

Augmented reality – Interactive experience with a real-world environment using a smart device. Augmented reality experiences often include visual elements overlayed on the surrounding environment.

Access points – Wi-Fi access points that can be used to provide public Wi-Fi and location and mobility analytics

Broadband – An always on high-speed internet connection.

Cisco Meraki unit – A brand of access points used across Wales.

Digital champion – Someone who is digitally experienced and can help and support others to improve their digital skills set.

Digital strategy – A plan of action that focuses on digital technology as a way of achieving a set of goals.

Internet of Things (IoT) – A network of devices and sensors.

LoRa – A way of sending small pieces of information frequently from sensors to a cloud where people can access it. A long-range and low-power wireless communication systems.

LoRaWAN – A set of rules that determine how information is sent across the LoRa network (the network protocol).

LoRa gateway – A device that collects the information sent from a sensor and sends it on to the cloud, where it can be accessed.

Superfast broadband – Broadband which provides download speeds of 30 Mbps or more. The connection is typically provided by a fibre cable to the street cabinet and then a copper cable to the premises.

Third-party data – Datasets (that can be bought) which are produced by organisations that do not directly interact with the source of the data, such as the customer or a business.

Town Wi-Fi – Public Wi-Fi which covers a town or town centre.

Ultrafast broadband – Broadband which provides download speeds of around 300 Mbps or more. The connection is typically provided by a fibre cable the entire way from the local exchange to the premise.