



KENT PUBLIC SERVICE NETWORK

Govroam Case Studies



- INNOVATION
- COLLABORATION
- TRANSFORMATION

KPSN Govroam snapshot

Purpose

To enable Kent public sector organisations to collaborate more effectively and provide roaming Wi-Fi services to 30,000+ staff across the KPSN Partners.

Costs

Govroam deployment:
£120,157.08

Eduroam deployment:
£5,000

Outcomes

- 400+ Govroam sites
- 208 Eduroam sites
- 6,500+ connections per week
- KPSN forefront of a national agenda
- Enabling multiple groups and projects
- Laying groundwork for future Gov/Eduroam and Public Wi-Fi development

Challenges

- Technical support complexity
- Growth and capacity
- User guidance and comms

Service Introduction

What is Govroam?

In an ever more flexible, resilient and collaborative public sector, staff need to connect to the internet and to systems at their home organisation, in multiple locations, using any device – whether they're managers, members of the emergency services, or people in multidisciplinary teams. Govroam, short for Government Roaming, is a secure private Wi-Fi network exclusively for public sector staff enabling seamless connectivity.

Public sector staff can access the Govroam network provided by any participating organisation, using a single, securely-authenticated sign-on managed by their own organisation.

Visiting staff can access any Govroam-enabled guest network in the same way, using their own sign-on credentials, reducing the time spent managing guest accounts.

Benefits

- **Easy-to-use internet access across multiple sites** – Staff using Govroam can work more effectively in different locations because they don't have to worry about connectivity
- **Authenticates users securely** – Govroam is supported by a secure login process under the principle of a single, authenticated sign-on, managed by the user's own organisation
- **Saves time on guest account management** – Using Govroam, you can reduce the time staff spend managing guest accounts, because Govroam-enabled visitors 'just connect' and are authenticated using credentials issued by their own, trusted organisation
- **Tried and tested technology** – Govroam uses the same proven technology as Eduroam, which has been in place for 15 years
- **Procurement confidence** – Govroam is available via the G-Cloud procurement framework, so Public Sector organisations can be sure they are meeting the necessary procurement rules
- **National Standard for Roaming** – As a national service managed by Jisc, Govroam is setting a national standard for public sector roaming services
- **Promotes collaboration and efficiency** – Govroam encourages flexible working across organisations and enables service integration in traditionally siloed disciplines such as Health and Social Care
- **Saves money through estate rationalisation** – Govroam is a technology that encourages co-location opportunities between public sector organisations
- **Security through attack surface reduction** – By sharing infrastructure and best practise security, Govroam reduces the variety of vulnerabilities created by having multiple separate Wi-Fi configurations
- **Helps meet government targets** – Public sector have many savings targets to meet. Govroam supports this through infrastructure savings, and savings in staff time and efficiency

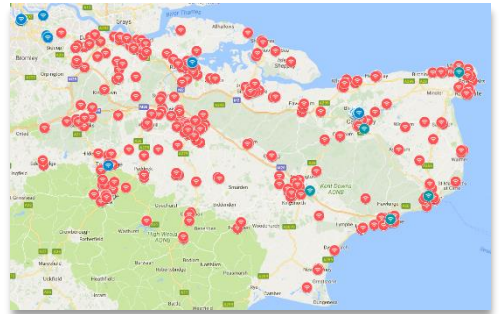
Where can you connect in Kent?

- 100+ Council Buildings
- 100+ University Buildings
- 87 Libraries
- 63 Fire Stations
- 49 Children's Centres
- 8 Youth Centres
- 6 Hospitals
- 5 Adult Education Centres
- 4 Leisure Centres
- 3 Family Centres
- 1 Castle
- 1 Theatre

What is happening in Kent?

Kent has a long-standing history of Partnership working. One of the latest projects to come out of the Kent Technology Partnerships (Kent Connects and Kent Public Service Network) is a county wide implementation of the Govroam service. Govroam enables public sector staff to effortlessly connect at over 400 sites including:

- Hospitals
- Council buildings
- Police stations
- Fire stations
- Universities
- Libraries
- and more



This service was developed to support Kent's growing need for collaborative spaces for public sector organisations, whether this be supporting the safeguarding of adults, resiliency collaboration with Kent Police and Kent Fire & Rescue Service, or the collaboration of County and District Councils to provide one-stop-shops to citizens.

The award winning KPSN Govroam service has already enabled a host of shared working across the county and is freeing up staff to provide services to citizens where they need it.

Project Aim

The aim of the KPSN Govroam project was to enable roaming Wi-Fi services for Public Sector staff across 16 organisations in Kent, including Local Authorities, Kent Police and Kent Fire & Rescue. This would make seamless, secure connectivity available to approximately **30,000+ staff across the county**. This aim was met in July 2017 and has continued to grow as others in the county began to adopt Govroam in partnership or alongside KPSN including Universities and NHS Foundation trusts.

Khipu

Khipu Networks is a leading provider of next-generation Wi-Fi and cyber security solutions within the public sector. Khipu hold the royal charter by appointment to Her Majesty the Queen as Network Security Provider.



KPSN commissioned Khipu to supply and manage the Kent Govroam service because of their experience of supporting Radius architecture and Wi-Fi solutions.

With the assistance of Khipu, the KPSN Partnership has developed a shared service platform to underpin the Govroam service and join up Partner implementations. Khipu provide ongoing technical support and management of the KPSN Govroam solution.

Timeline

Initial PSNRoam pilot proposed. Ashford Borough Council, Kent County Council and Kent Fire & Rescue Service took part.

The PSNRoam project was proposed to Kent Connects Boards to gain funding. The project was approved and funded through the Partnership.

Partnership hardware orders are placed, onboarding plan is agreed, and the Partnership central infrastructure is installed.

Partners begin to receive their hardware orders. The Partnership and its supplier Khipu begin to support Partners in the installation and set up of their local infrastructure.

KPSN Project Implementation

Project Outset and Background

In November 2015 the first proposal for what would become the KPSN Govroam service was submitted to Kent Connects Boards as a pilot proposal under the title 'PSNRoam'. The pilot was supported and progressed into January 2017.

With the pilot's completion a full proposal was submitted requesting **£90,247.08 +VAT for hardware and implementation, and £29,910 +VAT for maintenance in years 2 and 3**, to deliver roaming services across KPSN to its Partners. The request was granted, and the project funded from the Partnership development fund.

This project would not develop into Govroam until later into the implementation when it was realised that the Kent PSNRoam project could be merged into the Jisc national Govroam solution with a few configuration changes.

How it works

KPSN implemented a federated 2 tier solution.

Tier 1

Each organisation that is part of the implementation would have a Radius server installed in their network. These servers would have two roles:

1. To take requests from visitors on their network and direct them up the chain, awaiting authentication before they could provide the visitor internet access.
2. To receive and authenticate connection requests from their users who are out at other sites.

Tier 2

The central KPSN Radius server. This device is located on the KPSN WAN and acts as the focal point for all requests coming from Partner sites. This server then checks the requests domain information and directs it back down to the appropriate Partner's home network for authentication before directing the response back to the visitor and hosting organisation.

Example

An Ashford Borough Council user is visiting County Hall (a KCC site). They connect to Govroam and log in with their normal details John.Smith@ashford.gov.uk. This is picked up by KCC's Radius that recognises the Ashford details and directs it up to the KPSN Radius. When it arrives at the KPSN Radius, again the Ashford details are recognised and the request is passed down to Ashford's Radius. Finally Ashford receives the request, sees it as one of its own users, checks the details against Ashford's active directory and approves the request. The request then travels back along its path to KCC's Radius that then grants the user internet access. The process takes seconds end-to-end.

Timeline

April 2016

The remaining Partners receive their hardware and are supported in their installation and setup.

All Partners' local servers are connected up to the Central Partnership service.

221 sites are connected up to the service.

A total of 234 sites are connected.

KPSN began discussions with Jisc about migration onto the newly formed Govroam service. Partners support the move and the migration for the Partnership to become part of the National service begins.

What the user sees is a seamless connection at any site with the same login information they use at their office.

As the service evolved into Govroam the implementation linked to a third tier in the Jisc central service. This enables users from outside of KPSN who visit KPSN Govroam sites to have their requests passed to Jisc then back to the visitor's home organisation for authentication. Effectively adding another layer to the service that functions in the same way but on a national level.

Rollout

Following the approval for the project to go ahead, the Partnership purchased the required Radius infrastructure for rollout across the Partners. The rollout of KPSN Govroam was split into two phases, the first being the rollout and installation of the infrastructure that would support the service and the second the enabling of sites.

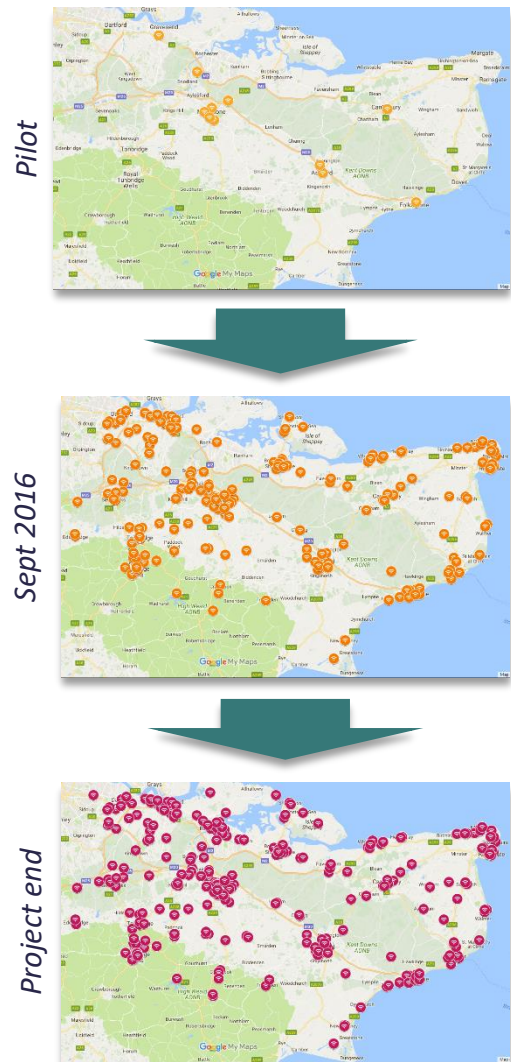
The first phase was completed over March and April 2016 in which all local servers were delivered and installed at Partners' head offices alongside the installation and setup of the KPSN Partnership Radius servers in two of the Kent Data Centres.

With the infrastructure installed the second phase of the rollout began, which was to make Govroam available at sites across Kent.

Between May and September 2016, the number of enabled sites grew from the original pilot group to encompass 234 Govroam enabled sites. This was a sharp increase over a short period of time as Partners focussed on deployment to those sites that utilised their standard managed Wi-Fi infrastructures.

The next big expansion saw the number grow to 316 sites between March and July 2017 as Partners saw the benefits in their enabled sites and pushed to grow the network further.

This completed the agreed rollout of the project, which came in on time and to budget. The network then grew further following project completion.



KPSN Govroam site numbers growth

Timeline

Migration of all Partners to the national Govroam platform is completed.

240 sites are now live with Govroam.

316 sites are now live with Govroam across Kent. The rollout project is considered complete

East Kent Hospitals University NHS Foundation Trust begin to rollout Govroam across their five acute hospitals.

All three Universities in Kent deploy Govroam across their campuses bringing total sites to 400+

The Partnership begins work on expanding the service to cover Gov/Eduroam and Public Wi-Fi

Completion and Outcomes

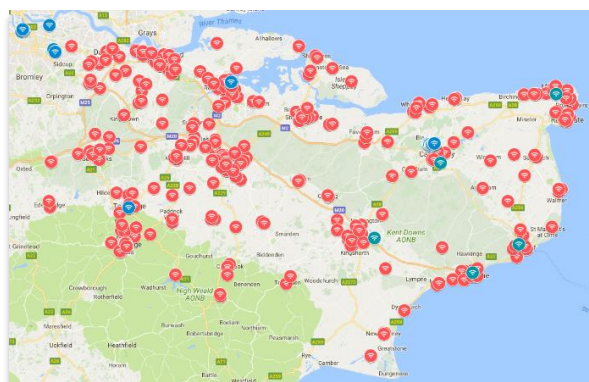
With the project rollout completed, the Partnership began to see the benefits of the live service and continued to support Govroam as the user base began to grow.

The service is proving very popular and has become part of the KPSN core service. It has grown to replace corporate Wi-Fi solutions in some areas, and recent figures have seen the KPSN service authenticating 6,500+ Govroam users per week, with an average of 814 connections per day. KPSN's biggest Govroam users are Kent County Council and Kent Fire & Rescue Service, both regularly seeing thousands of user authentications per week.

The service has had its share of complications. Many points of contact involved in the authentication of a user can create complexity when diagnosing faults. A typical user authentication interacts with 3 (or 4 if outside the county) different organisations' infrastructure, and an issue they experience may be due to the user device or another non Govroam issue.

In response to this KPSN have improved and standardised the support processes. Technical expertise for the platform only increases across the Partnership as the service continues.

Govroam is a growing community and KPSN are at the forefront of the initiative. The service supports many partnerships, projects, groups and more across the county, some of which are shown here in the case studies.

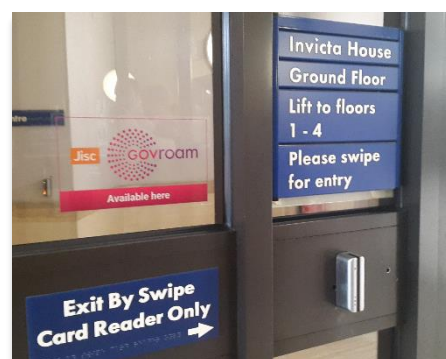


Current 400+ Govroam enabled sites in Kent

Supporting Users

The next steps were to ensure KPSN were supporting users to enable them to make best use of the service.

To do this KPSN initiated awareness campaigns and developed supporting documents on how to connect to Govroam, what it is and how to get support. The KPSN team have also been proactive in distributing Jisc Govroam promotional material such as leaflets on Govroam and Govroam stickers across enabled sites to promote access to users.



Site stickers at KCC building

Public Wi-Fi, where to grow?

Kent is looking to support its citizens with public Wi-Fi. There are a variety of locations where we plan to implement, including; country parks, care homes, drop in centres, family support, council offices, GP surgeries and so much more. Eventually KPSN want to offer Public Wi-Fi at every site.

The Govroam Companion App

To support Govroam users in finding their nearest site, Jisc now offer The Govroam Companion, an interactive map application showing active Govroam venues around the UK. It is available for free on iOS and Android mobile devices.



The app in use

Kent was the first to publish their sites on the Govroam Companion App, working with Jisc to make KPSN sites available and publicise the service not just to local users but those across the country as well.

Future Plans and Growth

KPSN have had great success with the Govroam and Eduroam services. Now KPSN are looking to expand the offering to include public Wi-Fi accessibility at public sector sites.

The ultimate aim of this growth is to provide high quality connectivity to everyone at any Public Sector site in Kent. With Govroam in place, organisations can do away with maintenance on corporate Wi-Fi networks. Eduroam will allow academics and students access across the county and finally public Wi-Fi at all sites will allow citizens and business guests connection.

In this way Kent Public Services can offer a consistent, secure, and reliable service to all who engage with them, be they Partners, Higher Education, members of the public or 3rd Party organisations.

KPSN are already beginning this journey and are planning to have public Wi-Fi pilot sites deployed across the county by December 2018. Following a successful pilot, a full scale implementation will proceed. Alongside the Public Wi-Fi rollout, work will also be undertaken to improve the Govroam and Eduroam services to make connectivity for users an even more seamless experience.

Part of a National Agenda

Govroam is a national service owned and co-ordinated by Jisc. Each authority or federation is responsible for their own implementation, with Jisc



providing the nexus that moves Govroam from a local endeavour to a UK spanning network.

This adds more value for signed up organisations including consistent security, a wider network of sites staff can access and a supportive community of experience to draw on. **The Jisc Govroam network now has 2,500+ sites across the UK.**

KPSN has been involved in the Govroam agenda since the early days along with other fore-runners such as the Yorkshire & Humber PSN and London PSN. This has been a mutually beneficial relationship for KPSN and Jisc with many positive shared opportunities including publicity and knowledge sharing. KPSN, for example, were the first to publish all of their Govroam sites on the Govroam Companion app, and the first to introduce a Police Force onto Govroam.

KPSN have also been a strong advocator of Govroam and are keen to share their experiences, positive outcomes and case studies with Jisc and the wider network.

To find out more about the national agenda visit:

jisc.ac.uk/govroam

Testimonials

"We have a wide range of multi-agency teams so working across a number of sites is vital to our purpose to effectively safeguard."

Govroam will allow our Board and 'on the ground' officers to work flexibly and securely, with improved access, whilst reducing the need for paper files. This will make a massive difference to the way that we support adults at risk across Kent and Medway."

– **Deborah Stuart Angus**
Independent Chair,
Kent & Medway
Safeguarding Adults
Board

"I was very pleased with the Govroam connection that was available to me over the three days at KCC. The Wi-Fi was easy to connect to and allowed me full access to Kent Fire & Rescue Service IT applications, it was like I was working from a Kent Fire Office."

I have no worries about the next time I am requested to support KCC during an emergency due to the IT service available."

– **Michelle Cheyne**
Senior Resilience Officer
Kent Resilience Team

Supporting the Safeguarding of Adults Case Study 1

The Kent and Medway Safeguarding Adults Board (KMSAB) is a multi-agency Partnership which exists to help keep Kent and Medway's adults safe from harm and protect their rights.

Over 2016/17 KMSAB have managed:

- 10,666 safeguarding concerns reported
- 40% increase in safeguarding referrals
- Training 412 multi agency officers



The KMSAB is a vital function and in the past has relied on paper based services.

They faced many challenges in supporting their multi-agency staff across multiple sites.

Govroam is helping to change this by providing seamless connection for the Board and their officers across the region. With improved connectivity KMSAB can now move away from paper based reporting as face to face meetings no longer require physical case records, improving their environmental impact and data protection.

Training of multi-agency staff and flexible working is also improved as social workers and other officers can now connect and work from a greater variety of sites with confidence.

Shared resiliency and remote working Case Study 2

During the heavy snow and serious disruptions during early 2017 many Kent Fire & Rescue staff along with KCC officers were working in Partnership to support a county wide response to the weather disruptions.

Kent Resilience Forum



PREPARING FOR EMERGENCIES IN KENT AND MEDWAY

This collaboration was extremely successful, requiring co-located working between the two organisations during the incident. The response from officers involved was overwhelmingly positive with much praise being attributed to the robust IT infrastructure.

Members of staff reported that having the strong Govroam Wi-Fi connection helped support direct communications from KCC into Fire Control / Fire Duty Officer and maintained a professional working relationship between Partners during the incident.

Govroam will have a wider impact for resilience besides response co-ordination and will support all staff in locating nearby locations from which to work using the 'Govroam Companion' app during periods where travel is limited.

Testimonials

"Govroam will help us get rid of our aging corporate SSID and we expect it to make a big difference for our mobile staff and especially student nurses via Eduroam."

– **Stephen Fuller**

IT Business Relationship
Manager
Medway Community
Health

"Facilitating shared working with seamless connectivity underpins the STP work and will make a fundamental difference to the working of the partnership."

– **Alan Day**

Corporate Information
Security Officer
Kent County Council

"We host mandatory training for mental health professionals, including for doctors who are section 12 approved. The AMHP Service works across Kent & Medway Partnership Trust and acute hospital sites. Shared connectivity with our East Kent Hospital colleagues can make a significant difference to our ease of delivery and improve service user care."

– **Helen Burns**

Service Manager
Kent Approved Mental
Health Professional
Service

Joining up Health and Social Care Case Study 3

One of the largest collaborations currently underway in the Public Sector is the joining up of Health and Social Care through the Sustainability and Transformation Partnership (STP).

This collaboration is underpinned by multi-agency working across both NHS and Local Authority owned sites. In Kent, Govroam is accessible at 6 hospitals, several healthy living centres and a large number of Local Authority social care sites.

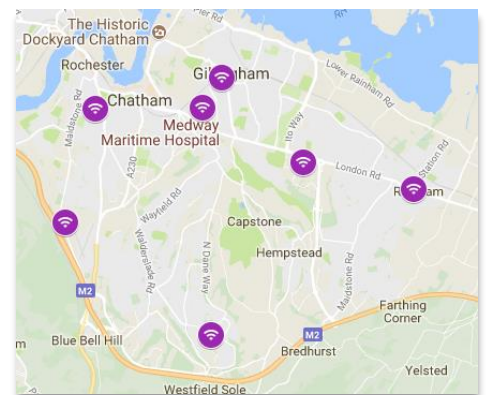
The seamless connectivity Govroam provides is supporting not only the ongoing work of the STP management in building this relationship but will continue to grow to support the ongoing multi-agency work as the STP matures.

Medway Community Health (MCH)

Medway Community Health (MCH) is rolling out Govroam and Eduroam to four Healthy Living Centres, Medway Maritime Hospital and other NHS sites.

Govroam will provide MCH with a robust Wi-Fi solution to replace their current corporate Wi-Fi and will allow their mobile staff to access the internet and corporate network using secure two factor authentication.

MCH also plan to facilitate colleges at Medway Foundation Trust who work out of these sites, and are excited to see how Eduroam will benefit their student nurses.



MCH Govroam Rollout

East Kent Hospitals University NHS Foundation Trust (EKHUFT)

EKHUFT have deployed Govroam to all of their acute hospitals across Kent. They have done this as a separate installation to the KPSN service.



EKHUFT Govroam sites

This has provided KPSN with a new set of opportunities to work together on connection testing with Partners outside of the Partnership service. This has resulted in further learning across the Partnership and a number of changes to help KPSN better support users visiting from outside the service.

Testimonials

"I chair the Kent Partnerships Information Security Group. Widespread, secure connectivity is valuable to all Kent Public Services, and enabling easy shared working with the Universities allows us to tap into a well of cutting edge research and the next generation of expertise."

– Darren Everden

Head of IT
Gravesham / Tonbridge & Malling Borough Councils

"The School of Computing at the University of Kent is delighted to work with the Partnerships. Our students gain invaluable experience taking placements in various Kent Local Authorities and agencies, and by hosting master classes our staff get to see how their research can be applied in practice while also sharing their expertise."

"We are very enthusiastic about our relationship with the Partnership, and look forward to working closely in the months and years to come."

– Simon Thompson

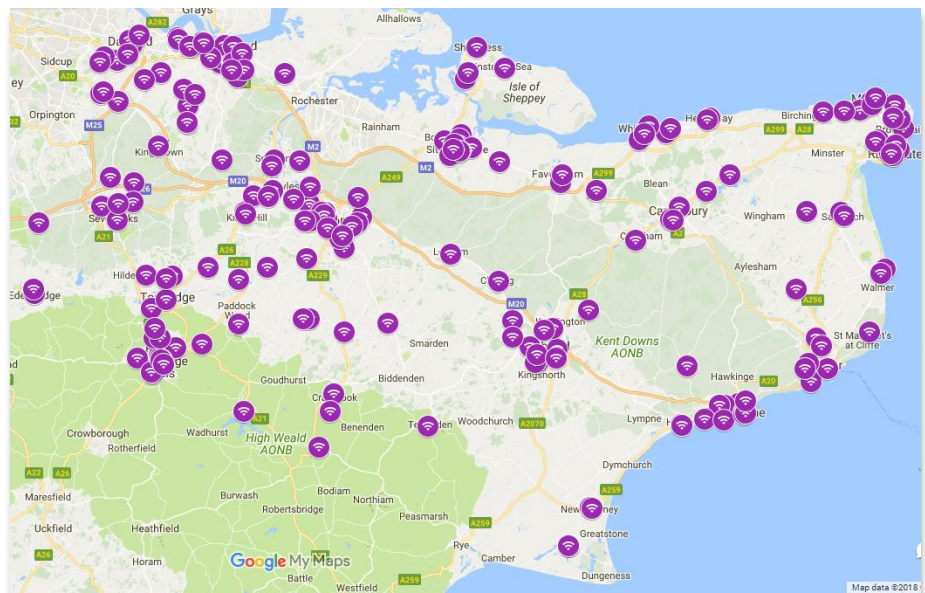
Director of Innovation
School of Computing
University of Kent

Working with Higher Education Case Study 4

Kent has always seen enthusiastic collaboration between its Local Authorities and its Universities. KPSN has long standing relationships with Canterbury Christchurch University (CCCU), The University of Greenwich (UoG) and The University of Kent (UoK). The interests of the Universities are represented within the KPSN Partnership by the GOETEC consortium.

Following the main push for Govroam in Kent, KPSN and GOETEC established an agreement to improve collaboration between Local Authorities and the Universities through Govroam and the higher education sister service Eduroam, in an attempt to saturate connectivity for all users at as many sites as possible.

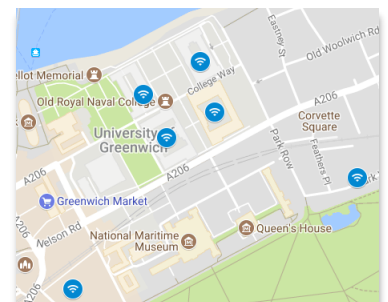
To accomplish this it was agreed that the Universities and Local Authorities would begin publishing Govroam and Eduroam simultaneously across sites to create seamless Wi-Fi connectivity between Higher Education and Local Authorities.



Map of the 208 dual enabled KPSN sites

Kent Local Authorities have now enabled 208 sites with Govroam/Eduroam dual connectivity, including many schools, council buildings, drop in centres and 87 libraries across the county.

The three Universities have now published across more than 100 venues covering all campuses, including The Old Naval College campus in London, The University of Kent's expansive Canterbury campus, Canterbury Christ Church's campus and the shared Medway campuses.



Map of UoG, Old Naval College campus dual coverage

Testimonials

"We are now changing our wireless network and using Govroam has made the migration very easy and seamless to the end user."

– **Keith Baker**
Principal Network
Engineer
Medway Council

"All of our Kent partnerships depend on collaboration and good will to achieve shared benefits across Kent's Public Sector, whether this is through technology, property or other partnership channels."

Govroam has a positive impact on many of our partnership initiatives in Kent including;

- co-location opportunities through One Public Estate
- shared connection for Health and Social Care
- flexible working culture
- and resilience

This kind of collaborative benefit is what partnership working was made for."

– **Ros Adby**
Head of Business
Partnerships and
Relationships
Kent County Council

Medway Council replaces corporate Wi-Fi Case Study 5

Medway Council is a Unitary Authority and member of the KPSN Partnership. Medway Council has approximately 2,500 members of staff.

With the implementation of Govroam, Medway Council was part of the initial rollout and made the service available at many of their sites. Over the summer of 2018 Medway Council made the decision to adopt Govroam as its main corporate Wi-Fi.

Medway Council have recently changed how their social care services operate and their social care staff were issued with Microsoft Surfaces to become more mobile and work out of any corporate site. Medway Council IT used this as the catalyst to move over to the Govroam system.

The way in which Medway Council have implemented this change is contained within their local network but is still utilising their local part of the KPSN service, and facilitates their staff to work at other organisation's sites.

Medway Council are the first to replace their corporate W-Fi with Govroam and are demonstrating that the service is robust and reliable enough to fully support entire organisations. Medway are now supporting up to **400+ concurrent users at any given point during a working day.**



Medway Council Govroam enabled sites

Since Medway have gone live with the change they have seen a massive increase in usage and are now successfully authenticating **34,880+ users every fortnight**, with an average of **2500+ authentications every day.**

Mission Statement

Through collaboration, supporting the transformation of public service delivery using innovative ICT solutions

Innovation



Collaboration



Transformation

An Award Winning Service



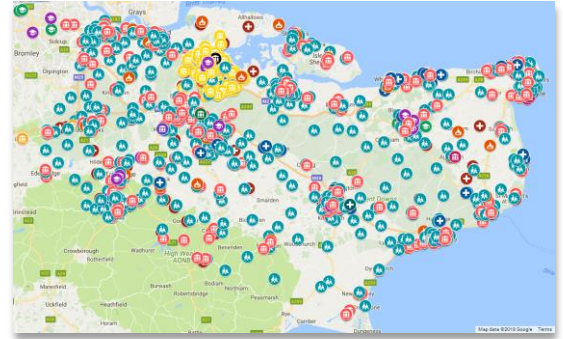
Certificate of Excellence
2018 WINNER

In November 2018 the KPSN Govroam service was awarded an IESE Certificate of Excellence.

This award is to mark significant innovations in transforming local public services.

The KPSN team

The Kent Public Service Network is a Public Sector Partnership that supports 28 user organisations with 1600+ connected sites across the region, including Hospitals, Schools, GP's, Council Officers, Fire Stations, Police and more.



Map of KPSN sites

KPSN reduces the cost of public services and successfully delivers multiple networks over its infrastructure. The KPSN Partnership has also been successful in enabling the de-duplication of connections into multi-agency buildings, encouraging co-location, reducing the cost of connections and acting as an enabler for wider shared services.

KPSN provides a wide range of services, including regional collaborative services such as Govroam, along with other areas such as cyber security, resilience, internet connectivity, PSN and HSCN services.

The team is a dynamic group of specialists committed to partnership working and supporting all KPSN Partners to meet cost savings and service improvement targets through collaborative IT infrastructure.

Contact Us

Want to find out more about the KPSN Partnership, why not get in touch?

Kent Public Service Network
Sessions House
County Hall
Maidstone
Kent
ME14 1XQ

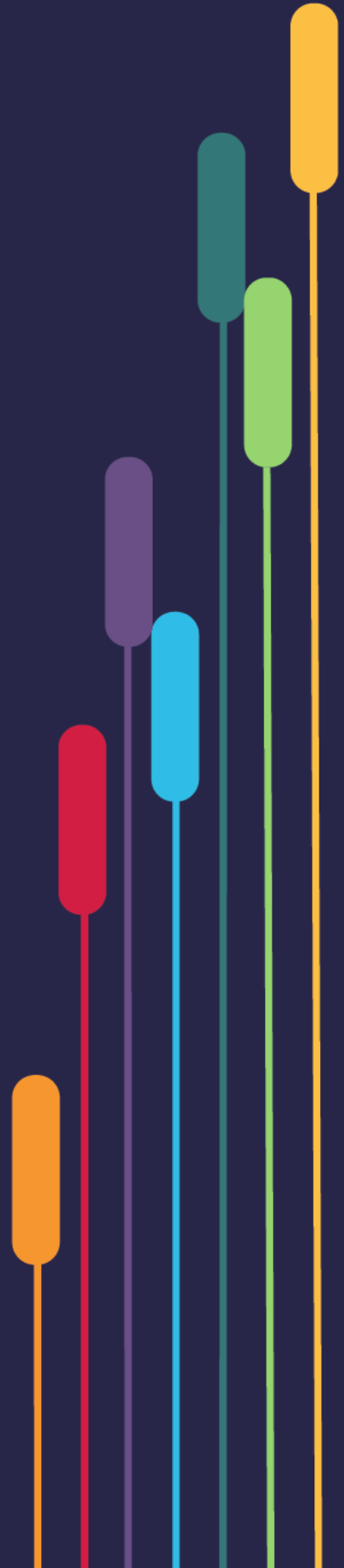
Website: kpsn.net

Email: kpsn@kent.gov.uk

Phone: 03000417736



KENT PUBLIC SERVICE NETWORK



KPSN.net