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Where do we start?
A suggested approach to establishing effective information sharing practices within strategic decision-making partnerships

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1 Introduction

The majority of social problems facing society today are interlinked. Issues such as crime, disorder, social exclusion and deprivation have numerous causes and far reaching consequences. Local strategic partnerships aim to tackle these problems by coordinating needs and effort across the local community in private, public and voluntary sectors. Within Community Safety Partnerships (CSPs), a wide range of statutory and voluntary agencies are involved in working to improve the lives of both offenders and victims of the resulting situations. However, agencies have only recently started working in partnership to attempt to share this information. It seems obvious that access to and better use of information by decision-makers can only be a good thing, and is one of the main targets of the 'Modernising Government' agenda. However, many committed partnerships are finding it difficult to know where to start in order to meet decision-makers' information needs.

The challenge of successfully producing informative and representative maps and analyses based on the combination of data held by a range of different agencies, in individual and disparate databases and IT systems, can often be a stumbling block for partnerships. Guidance is required on where to start and which approach to take. This paper outlines the 'Partnership Scoping Approach' adopted by two London boroughs, The Corporation for London and a data sharing partnership project across Cornwall. It begins from the point where the partnerships have established their overall aims and objectives in reducing crime and disorder and are now looking at engaging with partners and initiating data exchange procedures. Topics covered include strategic goals and information requirements, data sources, current analysis, use of Geographical Information Systems (GIS) and reporting techniques, data sharing protocols and the use of de-personalised information. Accounts are given of the progress made by the partnerships as a result of the work undertaken in the scoping studies.

1.1. Where do we start? By using geography

The Social Exclusion Unit report of Policy Action Team 18, 'Better Information', discussed how geography could enable the joining-up of data in a way easily accessible by all agencies within a partnership. Geography can also provide the platform for helping to ensure a consistent, comprehensive and accurate management resource for tackling local problems and disseminating information (Chainey, 2000). To summarize, management resource roles include:

- Integrating data.

- Sanitising data.

- Data analysis and exploring of management reporting.

- Individual access to service information and local initiatives.

Another way geography can provide an insight into local problems is by undertaking hotspot analysis. Hotspots can highlight areas of higher than average crime and/or disorder. A number of further benefits of hotspotting are:

- It provides statistical support, validating where resources should be targeted.

- It presents a picture prompting discussion. This enables all partners to contribute rather than following the view of one partner.

- It provides a base to monitor and measure targeted actions.

- It helps to raise the profile of improving the quality of information. This can be used to help identify and diagnose the problem, perform better resource allocation, consult more effectively with partner groups and the local community as well as establishing what initiatives work.

1.2. But what about the quality, precision, and protection of my data?

As highlighted in the government 'Privacy and Data Sharing' report (2002), where agencies base decisions on shared data, there should be a high level of precision and quality. If using geography to manage the data, steps need to be taken to ensure the information is also correctly geocoded. The data should be mapped to a level of precision that maximises the flexibility of referencing this data against other types of information. Precision levels could include that of the individual property or location, or the full postcode. Data that is aggregated to a defined grid network or ward, is often too general to see useful spatial socio-economic patterns within many multi-agency partnerships.

For information sharing purposes sensitive data also requires sanitising to comply with Data Protection laws. A common view exists that the Data Protection Act (DPA) is a hindrance to data exchange and dissemination of knowledge. There is certainly tension between the need for information and respecting an individual's privacy. However, the implementation of Data Protection principles can be complementary to data management within and across different agencies. This is specifically relevant to partners working to reduce crime and disorder as it affects society, both in terms of quality of life and the cost to society in catching offenders. Both apprehension of offenders, and prevention of crime can benefit from data exchanged between agencies. The 'Partnership Scoping Approach' helps partners clarify if using geography to manage the data is an option and if so, how much work is required to collect, clean and sanitise the datasets so they are 'fit for purpose'.

2. The 'Partnership Scoping Approach'

The 'Partnership Scoping Approach' provides an insight into each agency's vision, needs and contribution for data sharing within a multi-agency partnership in areas such as neighbourhood renewal, health or environmental services. From this, clear guidelines for implementing an information sharing strategy that works for all can be easily achieved. The four examples of partnership scoping work carried out, involved holding meetings with agencies who were seen to play key roles in the different CSPs. A questionnaire was used during these meetings to record responses of the partner agencies on 5 key themes:

1. The strategic vision and goals of the CSP.

2. Data sets each partner act as custodians of or had access to.

3. Current analysis of data used for crime and disorder.

4. The use of maps and analysis to support decision-making and management reporting in each agency.

5. Protocols currently in place for data sharing and the use of de-personalised information.

It is important to note that each representative knew how their agency's data was collected, recorded and analysed. This ensured relevant, accurate information was provided in these meetings.

2.1. The strategic vision and goals of the Community Safety Partnership

Individuals were interviewed using the same questions, to define each agency's view of the long-term strategic aims of information sharing across the CSP. Representatives were asked to state the benefits and advantages in contributing to the partnership as well as the difficulties or disadvantages they saw. This helped highlight the perceived barriers to sharing information, clarified how each agency saw their role in the partnership and gauged their understanding of a multi-agency approach.

2.2. Data sources

To create relevant, recognised, standard metadata for all the information within the partnership, each agency was asked to fill out a table of the data sets that they acted as a custodian of, or to which they had licensed access. The list for each partnership was not fully comprehensive as awareness of other useful data might not yet have been exposed - good information sharing practises will help to open doors to new information. The most detailed information was given for those data sets thought to be of most use to the CSP and focused on the 'Who, What, Where, When and How' components as highlighted by the Intra-Governmental Group on Geographic Information Metadata Guidebook (2002).

To measure the quality of information in the list, individuals were asked if they were willing to provide a sample of each dataset for data integrity testing. The tests focused on the quality, consistency and accuracy of the geographical and other attributes to check if geography could be used to manage the data. The time period the data covered and how it was maintained and checked were also clarified to ensure the data was current and timely. The final metadata list of datasets demonstrated the wealth of information potentially available to each partnership and helped support a more informed approach for targeting resources.

Each partner also compiled a 'data shopping list' to identify and prioritise data that was useful in supporting their own agency's everyday work. This list clarified the order in which new datasets should be purchased. Representatives were also asked to state data sets which were difficult to access and why.

2.3. Current analysis of community safety data

Partners were then asked if they had data that directly related to community safety. If so, they stated:

- Outputs created.

- Data use including analysis performed.

- How the information was produced.

- Names of those producing and using the information.

These questions ascertained the level of consistency and rigour within analysis in the partnership at the present time, and if analysis was done regularly or on an ad hoc basis.

2.4. Current use of geographic information in reporting and decision making

Questions about use of GIS and other software were asked to see how feasible the use of geography would be as a way to manage information sharing within the partnership. Where GIS was used, the types of mapping and analysis undertaken were asked of each partner. This focused on relevant geographical analytical skills, which could be transferred across the partnership. Agencies also stated how well the current GIS arrangements fitted their requirements and if no GIS was available, partners were asked if it would be beneficial. All representatives were asked if they have web and/or email access to ascertain if these media could be used to efficiently disseminate information between partners and the public.

2.5. Protocols in place for data sharing and the use of de-personalised information

Details of any protocols in place for data sharing and the use of de-personalised information were requested. This provided a measure of the extent of data sharing and awareness of data sensitivity between agencies. Within the questionnaire, partners were also asked to state data access problems and if they had data they were not willing to share, to explain why. Many barriers are the result of limited

awareness or cultural habits that require demonstrable examples showing how information sharing can work. This includes:

- The level of precision required.

- Keeping in compliance with the law.

- Being practical.

- Cost effectiveness.

- Providing improvements in decision-making.

It must also be noted that not all agencies will be able to share to the same degree at the same time and not every challenge will be solved first time. As the partnership matures, more and better information should become available. Barriers to sharing should also be removed or softened as trust improves.

2.6. Perceived geographical hotspots of specified crime types

All those interviewed were asked to identify where they believed specific crime type hotspots were. Individuals could mark as many hotspots as they felt appropriate. These were then digitised onto a map of the area. Actual police crime data was also mapped and used as a comparison. This was undertaken, as geographical hotspot analysis is often questioned as being a process that reveals what partners already know. However, hotspots of crime and disorder (or other socio-economic problems) may be knowledge of a few, but not general knowledge to many. Knowledge of where hotspots are concentrated may also be anecdotal, insensitive to changing and newly emerging patterns, and possibly unreliable if information is under-reported.

By illustrating the results of the perception versus reality of different crime type hotspots, it was hoped to enable all partners to realise the full potential of how their data could be used.

3. Results from the 'Partnership Scoping Approach'

The 'Partnership Scoping Approach' has been used successfully by a number of CSPs in London. These include the London boroughs of Tower Hamlets and Bexley. A major Home Office funded multi-agency initiative, for reducing both the fear of violent crime and disorder and the number of incidents associated with the misuse and abuse of alcohol in Cornwall, also used this approach.

The main results from the partnership scoping meetings have been summarized below. All agencies within each partnership received a report of these key findings. This provided agencies with a better understanding of their partnership. The report could also be used as a forum to discuss possible solutions to help improve efficiency in tackling community safety issues through a multi-agency approach.

3.1. The strategic vision and goals of the Community Safety Partnership

Although the majority of CSPs shared the same vision, the goals were not always clear between agencies and there were often a variety of concepts of the role of a particular partner. The main benefit and advantage partners believed partnership working would bring was knowledge about other agencies roles rather than sharing data. This low expectation of data may be due to the current limited understanding of the potential sources of data and the potential benefits of its analysis. There was certainly reference to the need for and benefits of building on the current multi-agency approach for targeting community safety reduction resources and informed strategic decision-making.

Table 2 describes the key barriers some partnerships found to sharing information (not in priority order). It is worth noting that many of these barriers were highlighted by PAT 18 two years ago. These issues need to be addressed if partnership working is to be maximized. In the report given to each partner, a list of all issues mentioned was provided to enable discussion of barriers to information sharing.

Key issues
Other agency priorities: competing issues and initiatives
Data Protection, human rights, freedom of information, crown copyright licensing
Resourcing and funding
Data quality
Putting information sharing into practice: data exchange, coordinated analysis and information interpretation
Information management, data access and central coordination
Culture and ethos against information sharing
Raising awareness and retaining enthusiasm
Technology issues
Scepticism about usefulness of results

Table 2: Key barriers to information sharing

3.2. Data sources

A full metadata list of current information within the agencies was provided. This was welcome as there was usually limited awareness of data available within the partnership and a lack of documented procedures offering timely and structured access to information, which often caused some frustration. A complete prioritised 'data shopping list' was also created to focus future key data needed to improve the understanding of community safety issues. The IT infrastructure was cited in some partnerships as making sharing information difficult. However, several agencies were in the process of implementing new IT systems to manage their data, and most people had access to email and the internet which could provide an easy mechanism to disseminate shared data. Several agencies also stated a need to address their own in-house data management issues before they could actively contribute information to a partnership.

3.3. Current analysis of Community Safety data

Most partners undertook limited analysis and reporting often with no focus on geographic information. This was usually in the form of annual reports, submission of statistics including performance indicators to central government, or one-off data supplies for the recent Crime and Disorder Audit. A lack of regular, local level information was presented to most Community Safety steering groups, which attributed to limited monitoring and evaluation of partner initiatives.

3.4. Use of Geographic Information in reporting and decision making

Where GIS software products were used across the partnerships, most were standard products in popular use across the UK enabling easy importing and exporting of geographic data.

The majority of GIS use was for descriptive mapping such as displaying partners' own data with a base map and helping forward plan or support tasking. Most GIS users rated their software as largely meeting their demands. Where there was demand to improve GIS capabilities, opportunities were available to increase functionality through upgrades and add-ons. Unfortunately some versions of certain GIS were too old to upgrade without significant investment.

The majority of partners that did not have GIS thought access to some form of geographic information would be beneficial, although others thought this element additional to their needs.

3.5 Data sharing protocols

Most partners did not have an information sharing protocol although the majority of partners stated that their information could be shared within the partnership, providing that Data Protection requirements were met. Although people were aware of Data Protection issues, some partners used this as an excuse not to share data rather than taking the time to agree a protocol. Sanitising the data is necessary and the 'Partnership Scoping Approach' helped clarify how this could be done for each data set using a geographical reference.

3.6 Perceptions versus real hotspots

The comparison between the perception and reality of different crime hotspots varied between different partnerships. However, regardless of crime type, there were significant differences between perceived and actual hotspots. For example, in Figure 1, only 7% of perceived and actual robbery hotspots match. Apart from information discussed in partnership meetings, reasons people gave for choosing certain areas included:

- Local newspaper articles.

- Impression gained from driving through areas.

- Deprived areas having more crime.

- Affluent areas having more crime.

- Specific locations such as the town centre, stations, car parks or schools acting as focal points.

Figure 1: Perceptions and actual hotspots of robbery in a London borough
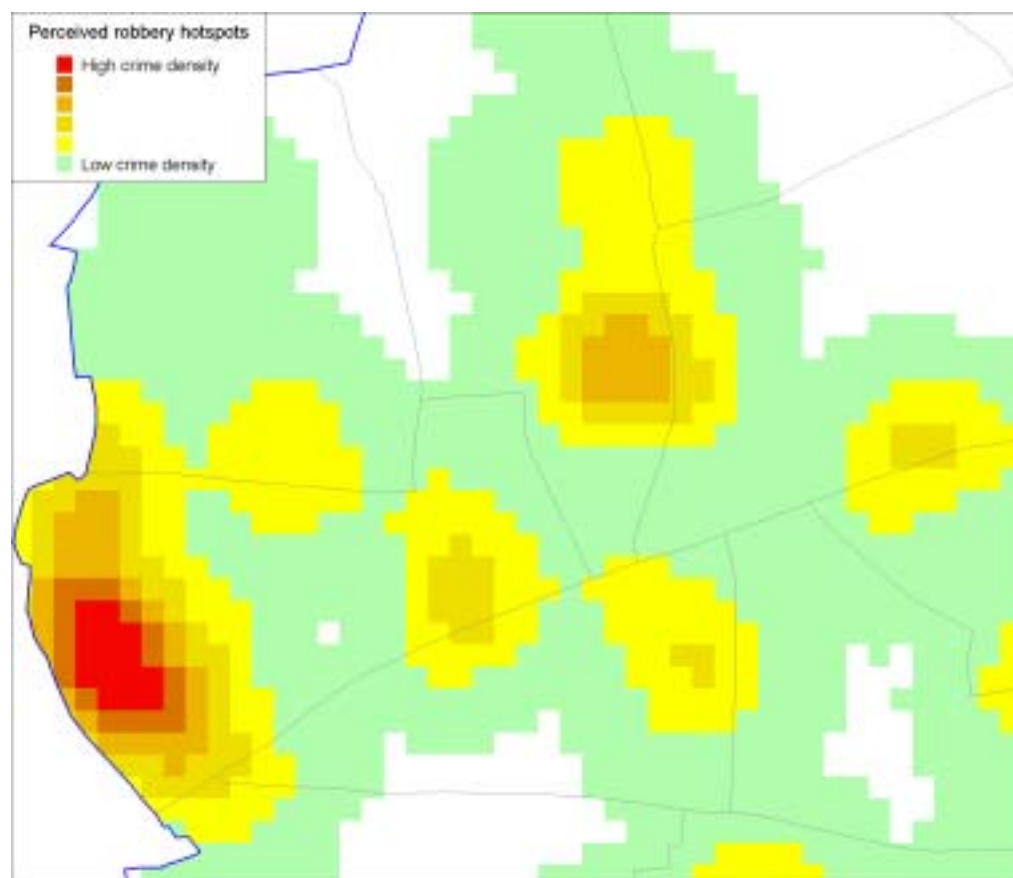
Perceived robbery hotspots
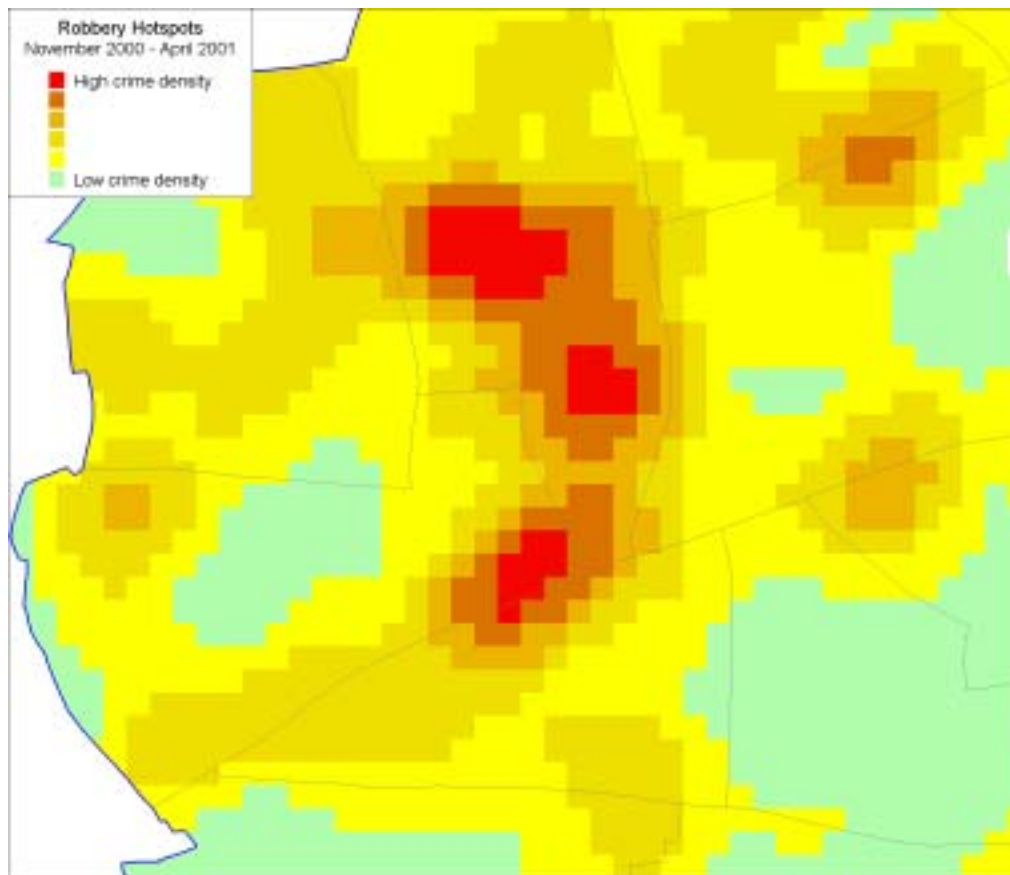
Actual robbery hotspots

This exercise demonstrated the need to develop good, accurate information systems that support informed approaches to decision making, rather than following partner perceptions. A visually stunning hotspot map does not necessarily provide the answers to why crime or disorder occurs within a particular area, but does enable a more focused approach to understanding why areas require crime and disorder reduction targeting. The results of this exercise were provided in the report for all partners to digest.

4. The next step

The 'Partnership Scoping Approach' empowers multi-agency partnerships to examine how to improve their information sharing practices. Due to the specific questions, different elements of the current data sharing process can be examined separately, providing:

- A list of datasets readily available and a prioritised 'wish list' of data that agencies would benefit from.

- Defined barriers to information sharing within each partnership to be tackled.

- A list of the GIS software and analysis currently used within the different agencies.

- Current analysis of community safety data.

- An illustration of hotspotting crime data, geographically.

As a CSP develops, this approach could also be used to clarify if membership of potential new agencies would be mutually beneficial and aid further understanding of local issues. However, it is only a tool in sharing data and cannot resolve the data sharing issues if agencies in the partnership are unwilling to cooperate. Champions are required at all levels (from senior management to end-users) for multi-agency data sharing to be successful.

4.1. A proposed model for partnership analysis

Following the 'Partnership Scoping Approach', all partnerships were advised in establishing a centrally coordinated approach for exchanging data for analysis within the partnership. To enable a manageable, proactive approach to be taken, phased implementation is recommended. This enables understanding, commitment and trust to build up within the partnership, resulting in a greater likelihood of a successful and sustainable information sharing model.

This could occur at a number of levels. One way would be for data to be archived regularly on local PC's. The archived data would ensure requests from partnership agencies could be more easily managed and up to date information would be fed into steering group meetings. Another option would involve creating an information hub managed at a central resource such as the Community Safety Unit. This hub would manage and perform analysis on behalf of the partnership (see Figure 2). If partners required information from the central source, sanitised information would be supplied. If analysis identified certain areas for more focused attention, personalised information could be requested from the original data custodian, as long as crime and disorder legislation, supported by Data Protection principles, made this possible.

Figure 2: Information Sharing Hub framework
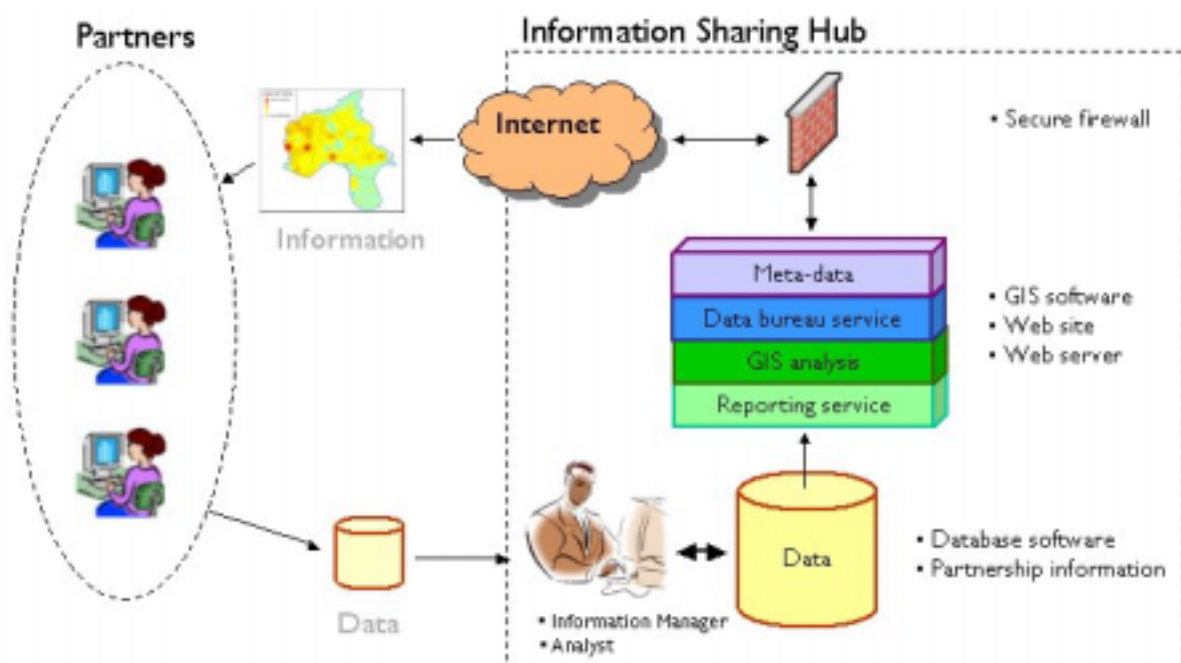
In either case, the shared information must be identified and agreed by all partners under an information sharing protocol. It would be the responsibility of the data guardian to sanitise their data to an agreed consistent standard (e.g. BS7666). If however this was not possible, unsanitised information should be supplied for depersonalising at an agreed central resource. In this instance, once personalised records were sanitised, the original records would be destroyed.

4.2. London Borough of Tower Hamlets progress made after the partnership scoping study

Using the 'Partnership Scoping Approach', the London borough of Tower Hamlets went on to create their Crime and Disorder Audit. As Mike Howes (acting Head of Community Safety for the London Borough of Tower Hamlets) stated, although they were significantly behind schedule, the Audit '*finished according to the programme.*' This was helped by the fact that the data sharing issues to be tackled had been clearly defined using the 'Partnership Scoping Approach'.

4.3. Progress made after the partnership scoping study in Project Amethyst

The aim of Project Amethyst is to reduce both the fear of violent crime and disorder and the number of incidents associated with the misuse and abuse of alcohol in Cornwall. A key element of the project is to

develop a process by which local crime and disorder partners could access consistent, shared, de-personalised information. From this, effective analysis could be undertaken to advise on creating sound economic and social interventions. However, as Sgt. Lyn Gooding, Project Amethyst Manager stated, *'The Project Board knew what it wanted to achieve, but didn't know where to start'.* The 'Partnership Sharing Approach' helped understand the issues amongst the Amethyst partners. A pilot study using two Cornish districts was then undertaken to establish an information sharing model and demonstrate the effectiveness of a multi-agency approach to information sharing. From these pilots, Amethyst plans to implement a web-based information hub.

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