



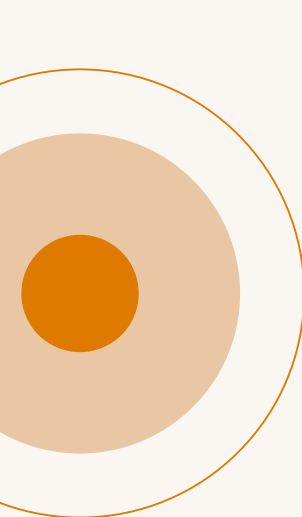
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Real-Time Data Streaming

The Decisive Government Edge

AN EXECUTIVE ROUNDTABLE

In association with Confluent



If you knew all the events happening across your organisation, at scale, and could respond to these events automatically in real-time, what problems would you solve? That was a central question posed at a recent CIONET executive roundtable convened in partnership with Confluent.

Exploring the strategic shift from batch processing to data in motion, the evening provided an opportunity to elicit some best practice, discuss the challenges of implementation, and the opportunities available to central government departments and other public sector organisations.

Here are some of the key observations from an evening of insights, opinions, and engaging conversation.



The case for real-time data

The words of General Sir Jim Hockenhull, Commander of UK Strategic Command, were invoked during the discussion. In spirit, at least. During a 2023 keynote address to the public sector he maintained that the challenge is no longer just having data; it is the speed at which that data becomes decision-ready intelligence.

For those working in defence and security, the applications of data streaming platforms (DSPs) come readily to mind. And there are use cases elsewhere across Whitehall, too, suggested one attendee alluding specifically to the occasional crises in the educational sector. Those working in healthcare agreed that they could also imagine suitable use cases, to support moments of highly-pressured decision making in a medical setting.

Contemplating the benefits of real-time data versus delayed data, one attendee asked rhetorically: “Would you cross the road based on an image of traffic on that road that’s four hours old?” Another speaker observed: “In a world of artificial intelligence, you need to know what’s happening now. AI is only as good as the context you give it.”



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Not all data needs to be real-time, however. Once operational data becomes historical data, it offers a secondary use. By applying analytics to older information, lessons can be learned—and patterns observed—that might inform the likelihood of future events or the benefits of taking one course of action over another.

The challenge of data integration

During that 2023 speech, General Hockenhull also urged that: “We must be integrated in our approach to data exploitation, in developing the digital backbone to enable a coherent system of systems.” That’s easier said than done.

Attendees shared some of the practical reasons why efforts to assimilate information sources often fail, and thus preventing exploitation, real-time or otherwise. Common reasons include the complexity caused by legacy systems and software, the prevalence of vendor lock-in (“we’re dealing with five-year-old contracts that are long out of date”), fragmented systems, sensitivity towards data sharing, and constrained budgets.

One challenge for those with intermittent connectivity—think naval ships at sea—is how to evaluate the worth the data that they missed during an outage. If hour-old data, retrieved only when connectivity returns, has little value can it be easily jettisoned?

Another challenge of integration is the nature of the data itself. By way of example, one attendee compared financial data (“largely deterministic”) with health data. When it comes to the latter, the information obtained is often semantic and typically more complex (“there are 80 different ways to measure blood pressure,” he said using hyperbole to amplify his point).

Do banks do it better?

Pondering the struggles of technology adoption in the public sector, one attendee asked why other sectors—notably financial services organisations—tend to get it right more often. Accepting the premise of the question, another speaker offered in response: “Banks deal with money so they know how much everything costs. The public sector deals with people and how do you put a value on that?”

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Widening the observation, he suggested that there were greater pressures on cost-saving in the public sector given IT leaders are responsible for spending tax payers money. He referred to this as “the Daily Mail test”. Meanwhile, financial services have an overwhelming pressure to deliver on time and within the constraints of a highly-regulated sector. That focuses the minds and elicits a “paranoia about being in the papers” (what might be called “the FT test”).

There were other suggestions to why the discrepancy exists between the two. First, there exists a degree direct (and punitive) accountability on financial services’ leaders that tends not to exist among civil servants. As above, this helps concentrate minds on the project at hand. Second, and perhaps most contentiously, it was argued that the collective calibre of talent in the public sector is dwarfed by that in the financial services. Renumeration has much to do with this discrepancy. “The public sector is very good at bringing people in, training them up. And then they disappear into the private sector,” noted one attendee.

A third suggestion is that the “corporate memory” span inside a Whitehall department is shorter than it is elsewhere. This is in part due to the churn of staff and in part the upheaval caused by political upheaval—frequent, disruptive, and a fourth reason offered for why the public sector might lag behind in effective tech adoption.



Security, privacy and governance

One speaker, reflecting the concerns of others, articulated his own data challenge by asking: “How do we build a system that enables you to share intelligence across departments in a secure way?” It is a question that is asked across Whitehall not just for reasons of regulatory compliance but because of active threats. Case in point—the last time figures were disclosed, the MoD acknowledged that it had been victim of six million attacks on its network in a 12-month period.

Picking up on an earlier conversation about the merits of the approach taken by financial services (see above), one speaker observed that the regulatory pressures when adopting a new technology sometimes results in lead times of five years. Governance requires rigour.



The technology underlying data streaming

To understand the potential of data streaming, it’s worth tracing its origins. Apache Kafka is an open-source, distributed event streaming platform that can be used to collect, store, process, and consume real-time data feeds at scale. It began life as at LinkedIn in 2011, an internal project set up to address a key challenge for the professional networking service—how to handle massive volumes of real-time event data. It has since been applied across the public and private sector organisations since and is at the heart of the Confluent proposition.

According to research commissioned by Confluent, 44% of IT leaders report a five times return on their data streaming investments compared to 41% in 2024. According to the report that accompanies the research, DSPs can play a pivotal role in simplifying access to real-time data and making it easy to reuse. Case in point: 89% of IT leaders see DSPs as critical or important to achieving their data-related goals.

'Real-Time Data Streaming: The Decisive Government Edge'—a CIONET executive roundtable in association with Confluent—took place on Wednesday 23 September 2026 at the South Place Hotel, London.



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