

# Revolutionizing Financial Regulation

How The Bank of England's Prudential Regulation Authority (PRA) **Successfully Implemented Cognitive Search** In Nine-Months, Setting a New Benchmark for Fintech Applications in Large, Regulated Institutions.



**Use Case**

**Knowledge  
Management**

# Industry

Central Banking

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## Key Project Goals

Create an intuitive cognitive search solution allowing 1,500 PRA supervisors to easily search documents and emails, extract tables from PDFs, and leverage machine learning workflows to reduce search time and provide actionable insights.

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## Data Sources and Data Format

Squirro's solution featured a custom data-loader to index documents from the Bank's system, machine learning term extraction workflows, and communities functionality to personalize content.

# Products

Cognitive Search Technologies

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**1500**  
PRA supervisors

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**4500**  
Organisation Size

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## Tool Highlights

Squirro's cognitive search solutions provide advanced analytics and intuitive dashboarding to uncover new business opportunities and deliver comprehensive insights. Automation of routine tasks, enhanced data accessibility, and supported the PRA's core mandate of prudentially regulated financial services firms.



**Smart Search, Smarter  
Banking: Bank of England's  
AI Leap with Squirro**

Faced with the daunting task of managing vast amounts of unstructured data, the Bank of England's Prudential Regulation Authority (PRA) turned to Squirro and its AI-powered cognitive search solution for answers.

The technology was chosen for its ability to enable rapid analysis of large volumes of unstructured data, extracting valuable insights to support the PRA's regulatory functions.

The project aimed to create an intuitive cognitive search solution for 1,500 PRA supervisors, enabling them to search documents and emails efficiently, extract tables from PDFs, and leverage machine learning workflows to reduce search time and gain deeper insights.

With user-friendly dashboards and visualizations, PRA supervisors quickly identified emerging trends and sentiments in regulatory documents. This deep understanding of the data allowed the PRA to enhance its regulatory oversight, tailoring its approach to meet evolving needs.

## **Agile Delivery and Rapid Deployment**

At Squirro, we pride ourselves on delivering results quickly, a key differentiator from our competitors. As an international scale up with agile teams across four offices, we can rapidly deploy for our clients, ensuring swift and effective solutions.

Squirro's implementation at the Bank of England's Prudential Regulation Authority (PRA) is a prime example of how **AI can revolutionize even highly regulated industries**. The solution automated routine tasks, enhanced data accessibility, and supported the PRA's core mandate of regulating financial services firms prudentially.



# The Challenge

## The Imperative To Evolve Into A World-Class RegTech Presence

The Bank of England's *"The Future of Finance"* initiative seeks to facilitate the financial sector's adaptation to technological, demographic, and environmental changes by automating routine tasks, driven by the growing volume of unstructured data from supervised firms.

One of the commitments The Future of Finance set out for the PRA was to become a world-class RegTech authority. *"It's quite an ambitious commitment, and the first phase of us showing visibly to the public that we are meeting that target was the commercial tender that we put out,"* says Helen Packard, Digital Transformation Lead, The Bank of England. The tender sought a machine learning-driven solution for the Bank of England's unstructured data mountain.

*"The Bank of England stepping out and saying it wants to venture into the world of RegTech and FinTech is quite something, so we did get a lot of interest,"* says Packard. *"But the demo that Squirro showed us was so simple, usable and intuitive, and the culture, we felt, was a perfect fit."*

The Bank of England, by Packard's admission, is a challenging place in which to innovate. *"We awarded the contract in March, and the first thing we had to do was understand the design and run through a number of architecture steps to ensure that our infrastructure was credible and agreeable. We are the Bank of England, so we have to have a very stable, secure environment, and it took us a couple of months to understand how this design would relate to that."*



Packard noted that the project required a significant cultural shift within the organization. The success of the implementation was attributed to strong leadership support, modern technology infrastructure, and a clear market-product fit. The solution automated routine tasks, enhanced data accessibility, and supported the PRA's core mandate of prudentially regulated financial services firms.

*"The volume and the complexity of that information, and the evolution of fintech in financial services meant that we needed to find a better way to use that information in a more effective and efficient manner."*

**Helen Packard**, Digital Transformation Lead, Bank of England

One of the challenges the PRA team faced with the growing amount of information was that the existing document management system did not enable successful search queries, the search was slow, and there was a limited range of visualization tools. In addition, converting document formats for easy calculation and visualization was limited.



# The Solution

## **AI-Powered Infrastructure Driving Innovation**

The core of Squirro's solution was its Cognitive Search application, which uses Artificial Intelligence (AI) to search based on a user's intent, delivering an entirely new way of visualizing the available data. In addition to faster and more accurate results that draw on all data stored on any given platform, the application uses self-learning algorithms to enhance relevance.

Squirro built a custom data-loader plug-in to index documents from the Bank of England's document management system.

*"We worked our way back to index everything up until 2012, to get the majority of their document management system within Squirro," says Squirro Solution Engineer Peter Brejza. "We developed table extraction functionalities, and deployed machine learning workflows to allow the users to further explore their search results, and quickly filter through these documents"*

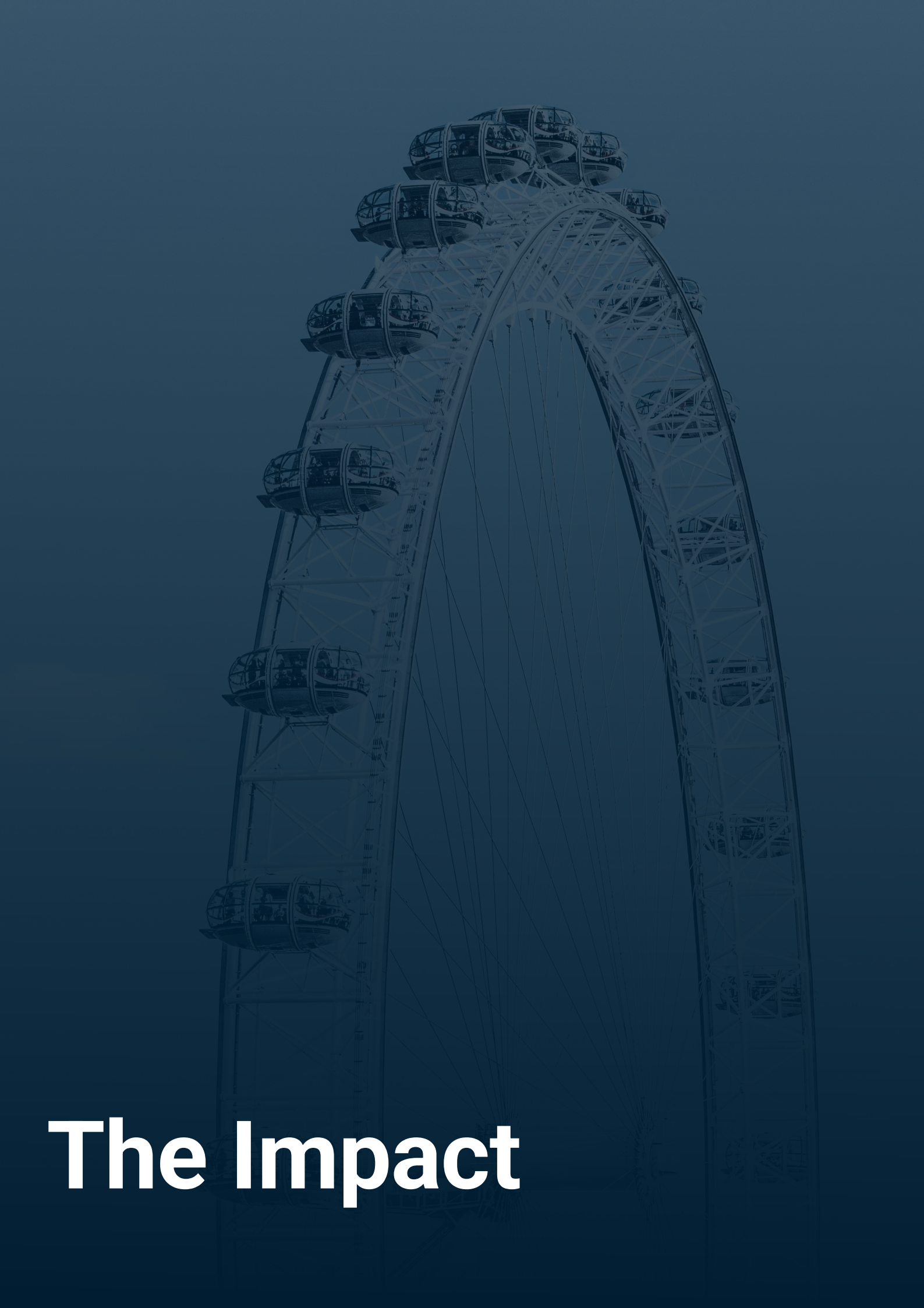


*"We also wanted to introduce the community functionality, allowing end-users to personalize content by specifying their topics or communities of interest. A PRA supervisor is typically interested in results relating to firms he/she looks after, so the community functionality was a good candidate for this."*

**Peter Brejza**, Solution Engineer, Squirro

The project aimed to create an intuitive cognitive search solution for 1,500 PRA supervisors, enabling them to efficiently search documents and emails, extract tables from PDFs, and leverage machine learning workflows to reduce search time and gain deeper insights. Despite the challenges, the solution was successfully implemented, setting a new benchmark for fintech applications in large, regulated institutions.

Packard says the efficiencies are already being felt, but they will blossom further with time. *"We didn't have a search engine before, and now we have one,"* she says. *"But as I keep telling people, it is not just a search engine - it is so much more. And I think people are getting that."*



# The Impact

## Scalability Across Financial Institutions

Squirro's solution transformed the PRA's ability to deliver efficient and effective regulatory services at scale.

Squirro's pioneering implementation at the Bank of England has set a new benchmark in organizational knowledge management. The results speak for themselves:

- **Increased Efficiency:** Users can easily find what they need, reducing search time.
- **Great Feedback:** Users praise the intuitive interface, with a huge waiting list for demos.
- **Huge Potential:** The solution has the potential to transform the way the Bank of England manages its knowledge, unlocking new insights and driving business performance.

By combining cutting-edge AI capabilities, strong data capabilities, and leadership support, Squirro has delivered a solution that is not just a search engine but a powerful tool for driving efficiency and effectiveness. It provides advanced analytics and intuitive dashboarding to uncover new business opportunities and deliver comprehensive insights.

For enterprise executive leaders like Helen Packard, integrating augmented intelligence capabilities within existing enterprise systems is a tremendous asset, even in regulated industries. It allows organizations to harness the power of AI while maintaining human oversight, and compliance with industry regulations.



The success of this implementation underscores the importance of modern technology infrastructure and leadership support in driving digital transformation.

The end result has been overwhelmingly positive. *"We're still seeing continued high usage, and the overwhelming feedback from users is that it's intuitive; they can very easily find things,"* Packard notes. *"Normally, when you deploy new systems, you desperately go around the teams and badger them to try it. Here, they are badgering us. Our waiting list for demos is huge."*

The solution's success at the Bank of England highlights the potential for similar applications across other financial institutions, demonstrating the scalability and adaptability of Squirro's technology. This case study showcases how the right product-market fit can drive significant value and efficiency in a highly regulated environment. The project's success underscores the importance of leadership support, modern technology infrastructure, and a clear market-product fit in driving innovation and efficiency.

As financial institutions continue to navigate the complexities of unstructured data, solutions like Squirro's will be instrumental in harnessing the power of AI to deliver actionable insights and drive business performance.

# Customers Trusting Squirro

## Bank of England

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Normally when you deploy new systems, you are desperately going around the teams and badgering them to try it. Here, they are badgering us. Our waiting list for demos is huge.

**Helen Packart**  
Digital Transformation Lead, Bank of England



The insights solution is a good example of how we leverage technology and FinTech partnerships to co-create innovative analytics capabilities to enable our frontline teams to have better conversations.

**Bireshwar Dasgupta**  
Global Head, Data Solutions, Standard Chartered

Bank of England



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