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Nottingham Trent University

Case study:
How Nottingham Trent University integrated Banner with Aptem

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Nottingham Trent University has been successfully delivering apprenticeships since 2016. The University has been voted RateMyApprenticeship's #1 University provider of degree apprenticeships in the UK for 2024, previously #1 in the Midlands in 2023 and 2022. It offers a wide range of apprenticeships in sectors including Business, Law, Construction, Digital, Health and Social Care.

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The university procured Aptem in January 2024. It ran its implementation of Aptem alongside a project to integrate its student records system – Banner.

This highly experienced team at Nottingham Trent University integrated it seamlessly. Here Callum Elliott, Project Manager and Christopher de-Vos, Solution Architect, from Nottingham Trent University, share the process they went through. They offer recommendations for other universities and training providers considering integrating Aptem with Banner or any other system.

NTU Nottingham Trent University

In conversation with Nottingham Trent University

What role does Banner play at Nottingham Trent University?

At Nottingham Trent University, Ellucian Banner serves as our main student records system. It is considered the single source of truth for student and programme data. In order to integrate this data across our IT estate of connected applications and services, we developed an integration hub. It takes data from Banner and other source systems and distributes it to consuming systems like Aptem.

This is much easier to maintain, support and keep secure than having a 'spiders web' of point-to-point integrations between our systems. It allows us to manage data schema changes centrally, rather than having to redevelop several integrations across multiple applications when a modification is required.

Why did you decide to integrate Banner with Aptem?

Like all institutions, the concept of a student having to enter the same details multiple times across a variety of systems isn't palatable for us. Banner is the system that captures most of the student data upfront. So, any other system our students need to interact with has to be able to accept the data already collected and only ask for additional data points. This formed a crucial requirement when we were looking for an apprenticeship management system. The availability of robust APIs and thorough documentation for Aptem during the tender process was a key factor in our choice to procure Aptem. These factors definitely made the student records system integration process more straightforward and reliable.

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The requirements and how the integration unfolded

What specific goals or benefits were you aiming to achieve with this integration?

The primary objective of this integration was to unify data and processes. We wanted to avoid creating divergent data sets by ensuring a seamless flow of information. This resulted in consistency and reliability in our data management practices.

What were the initial steps taken in preparation for the integration?

We already have an established, mature and effective process for integrations in general. It's something we've perfected over the last decade. In principle you have to answer three questions: Why, how and what? We start with a Business Analyst defining the key business processes that will be enabled by using Aptem. Then, a Solution Architect draws up architectural designs to illustrate how the systems will work together. This involves identifying the source systems, components, and high-level data entries. A System Analyst then details the specific fields, timing, and rules of engagement. This results in a comprehensive design specification that guides the development phase.

Did you need to upgrade or modify your existing systems before starting the integration?

One of our requirements was the need to feed information back into our Admissions system, which is an in-house developed application. Data created in Aptem during onboarding and functional skills assessment needed to be integrated into the Admissions system to maintain continuity with our existing admissions process. Extensive background planning and testing took place as part of the tender process to address this requirement.

Did you have a regular cadence of meetings?

We held regular meetings with our Aptem Implementation Consultant and the Technical Consultant who specialises in integrations on the Aptem side. Internally we had a monthly high-level steering meeting with SMEs and senior suppliers, along with devolved weekly meetings for developers, testers, and business representatives. This ensured we maintained continuous progress.

Who owned this project at Nottingham Trent University?

The Digital Technologies department. If integration projects are owned by Technology rather than acting as consultants to other business areas, it means we have all the expertise in one place with a robust and repeatable process for implementation. The alternative would be to have lots of business areas running separate integration projects and the expertise is lost the moment the project ends. This way it's centralised. We've learned from every integration we've done to really hone and streamline our approach.

How have you found balancing the integration with the rest of the Aptem implementation?

Despite the ambitious targets of concurrent migration and integration, we found the process manageable. The forward-thinking design patterns established at the start allowed for a clear understanding of what needed to be integrated as Aptem configuration progressed. This a-typical approach to concurrently integrate proved successful. We would consider similar strategies for future projects.

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Can you provide a step-by-step overview of the integration process?

1. We created a high-level plan based on requirements captured pre-tender.
2. A high-level design derived from these requirements.
3. Detailed requirements gathering followed.
4. This resulted in a detailed design phase.
5. After this we went into build, testing, and delivery.
6. The process was agile. We sliced different parts such as user provisioning and data extraction, for focused implementation.

Was there specific information that it was particularly important to include in the integration?

Onboarding checklists for our admissions process, user provisioning and compliance data formed the core of our integration. All of this was readily discoverable from the Aptem API documentation, which provided a menu of data items we could select to read and write to.

Did you find it helpful that Aptem has a dedicated integrations Technical Consultant to work with?

Absolutely. The dedicated Technical Consultant acted as a verification process, ensuring our robust API and integration practices were sound. This collaboration was proactive and highly beneficial. Aptem's two other Implementation Consultants that worked with us on the implementation of Aptem were also fantastic. They were proactively leading and guiding the process the whole way through. We've dealt with vendors in the past whose Implementation Consultants sit on the sidelines, passively. This was definitely not our experience with Aptem. The Implementation Consultants were great.

What kind of data needed to be synchronised?

We aimed to synchronise as much data as possible, only capturing any information in Aptem that hasn't already been captured in Banner. Aptem serves as the golden record for data not already in Banner, but we don't have a two-way data flow, to maintain data integrity.

Do you have recommendations for others looking to integrate Banner or other systems with Aptem?

Yes, our top tips would be:

- For each data entity, aim for a flow of data from the source 'golden record' system to the consuming system. Two-way data flows are difficult to manage and can easily cause data consistency errors. Which system is right?
- Lean into the advice Aptem can give. They are very hands on and highly knowledgeable about the capabilities of the system and integrations.
- Design around your business processes. At the end of the day, this is about real people doing real things, and not a technology exercise. If you don't make this easy and work within the business processes and requirements, your end users will find it harder to adopt the new system and may even feel justified in creating their own processes and data sets.
- Running implementation and integration build concurrently is definitely possible but the detail comes out when you've configured Aptem. You need to be far enough along with the Aptem implementation to determine what needs to be integrated.

Conclusion

The integration of Banner with Aptem at Nottingham Trent University was a meticulously planned and executed project. It was driven by clear objectives and a well-established process. The collaboration with Aptem's Implementation and Technical Consultants and the proactive approach taken by Nottingham Trent University ensured a seamless and successful student records system integration, setting a standard for future projects.

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