

INNOVATION - C1

SAMMIR RADHA

ALDER HEY CHILDREN'S NHS FOUNDATION TRUST

NORTH WEST, INTEGRATED

With special thanks to this innovator for taking part in the pilot of this programme and contributing to its development.



**FOR INFORMATION ON THE
INNOVATION PROGRAMME
CLICK HERE**

THE INNOVATOR

My name is Sammir Radha (ACMA CGMA) and I am the Systems Accountant for Bolton NHS Foundation Trust. I am dedicated to getting the best out of the systems we use and I specialise in financial systems, Excel and SQL.

THE PROBLEM

Systems **need to** allow for dedicated connectors from them to analysis tools of choice **because otherwise** time is wasted running reports, extracting it, manipulating it to show the detail they want and then working from it.

THE CHALLENGE

How might we cut out all the time wasted on downloading reports **so that** it is available in a format that suits everyone's needs?

THE INNOVATION

As a workaround for the lack of connection to the live data into the likes of Excel for Oracle R12 and Oracle Cloud, I built an RPA tool that extracts data from Oracle BI in the background which feeds a database that can be used to draw down all the data from without the end-user needing to do any of the extra waiting around downloading and manipulating reports to get it into a format which suits them.

The tool works on any system using Oracle BI (so ESR, SBS and NEP to name a few) and uses the fact that every report in Oracle BI can be accessed via a URL. Parameters such as Accounting Period Name can be passed to the report via the URL so that reports can be run for different parameters all at the click of a hyperlink. The tool itself goes one step further and stores the downloaded data to the file system where it gets uploaded to SQL Server where it can be manipulated using SQL in order to produce highly detailed data that can be read from the likes of Excel. The tool uses VBA in Excel and a VB script in windows task scheduler in order to run extracts every 20 minutes during month-end and every 3 hours outside of month-end from Oracle BI. The time can be set to be sooner but this was deemed unnecessary.

Any user of ESR, SBS or NEP for instance can use the concepts set out in the spreadsheet to build their own URLs to reports in their own Oracle BI and then work their way towards a finance database containing the downloaded data along with any reports that can be spun off them, like a transaction report or a budget statement.

It should be noted that you can only get data you already have access to. If the data is hidden behind Oracle BI Publisher or other BI administrative permissions then you'll need to get your system provider to grant you extra permissions or produce the report you want first before you can download it.

THE LESSONS LEARNT

- I would love to have gained any sort of information from Oracle with regards to bypassing their security without having to resort to RPA as the whole process works with a single HTTP request if only I could figure out the security/cookies required to allow the report to be ran any other way. I'd also say that if you're a finance team and want a pre-existing process to easily replicate in your RPA software of choice then this is the one to do if you're using a system with Oracle BI of course as it will remove the layer of risk involved in doing this through Excel and Internet Explorer, due to the latter being outdated and not supported by Oracle BI anymore (it still works, but new functionality may prove to break this process).
- I learned all about HTTP requests, the Oracle GO URL patterns and how to incorporate error handling into my VBA code. I also learnt a lot about website inspection to track HTTP requests and how to dynamically implement an SSIS project.

THE OUTPUTS

- Finance data available near-live straight to Excel (no stopping this from being ESR data too)
- Ability to leverage the power of SQL to connect multiple data sources to produce a powerfully detailed transaction report and budget statement
- Able to see reports that would otherwise be too difficult to achieve like having seeing temp spend compared to budgets for that temp spend or producing a quarterly detailed VAT report with all details and links to invoices
- Ability to interrogate data using SQL in SQL Server Management Studio instead of logging into and navigating in-system areas to search for the same thing
- Report generation in Excel using the SQL Server database allows for a full months' transactions including balance sheet to be produced in 10 seconds and rolling transaction reports, spanning over 24 months can be produced in under 3 minutes

THE OUTCOMES

- The RPA tool does the same job as the human did in 44% of the time
- If a human did as many extracts (every 20 minutes during month end and 3 hours outside of month end) then this would require someone employed for 0.57 WTE just to do what the robot is doing in the background (for effectively £0) If the 0.57 WTE was a band 2, this would be a saving of around £12,500 a year
- As it wouldn't be expected to do the same frequency by a human, the original human rate was 0.05 WTE at a band 4 so this is a saving of around £1,500 a year
- No burden on staff to run reports from our finance system as it was all done for them

THE QUICK WINS


Set up a simple spreadsheet with links to your favourite reports. Then when you need to filter on the fly then add this to your URL by appending a cell in your spreadsheet which contains the parameter filter. Then when you want to download the file, add the action to download as csv and so on until you're at the stage where all of this is working for you in the background automatically.




THE REVIEWERS SAID



AUTOMATED REPORTS FROM THE LEDGER SAVES SO MUCH TIME ESPECIALLY IN INSTANCES WHERE REGULAR REPORTS ARE NEEDED THROUGH OUT THE MONTH-END PROCESS.



AGAINST THE MANUAL DOWNLOAD OF REPORTS THIS IS A TIME SAVING INITIATIVE AND PROMOTES EFFICIENCY DURING MONTH-END.



ALL ORGANISATIONS SHOULD TAKE FORWARD AUTOMATED LEDGER REPORTS AS AN EFFICIENCY, THIS COULD BE AN ASPIRATION SET OUT FOR ALL FINANCE DEPARTMENTS BY A TARGET DATE.



WHAT YOU CAN DO NOW

If you recognise the problem stated and have implemented your own innovation to overcome it please submit this innovation to the programme and give others more examples to learn from.

SUBMIT INNOVATION

If you recognise the problem stated and would like to know more details about this innovation in particular, we will be hosting showcase and workshop sessions throughout the year, so all interested staff can gain ideas and inspiration from innovators in a manageable one-to-many format.

REGISTER INTEREST

If you have a problem but don't currently know of a solution to it, then please submit it here and in 2022 the Forum intends to crowdsource solutions to problems that don't currently have known innovations.

SUBMIT PROBLEM

If you would like to learn more about about the innovation programme please click below for more details

LEARN MORE

IN SEPTEMBER 2021 THE FORUM LAUNCHED...

- A national Innovation Programme for NHS Finance staff to submit their innovations for peer review. Successful innovations will be published and accessible to all on the One NHS Finance website
- A 'Software Skills For Finance Staff' event series taught by NHS Finance for NHS Finance including MS Excel, PowerBI, SQL etc.
- An 'Art of the Possible' briefing which explains two new technologies AI & Blockchain and discusses the opportunity for NHS Finance
- An Automation Group to review and improve the efficiency of existing national processes and returns

WHAT YOU CAN DO NOW

- Submit your innovations for peer review
- Sign up to be an innovation peer reviewer
- Read Art of the Possible
- Sign up for Software Skills for Finance
- Register your interest in automation and all things innovative

Innovation Programme



Software Skills



Automation sign up



Be a peer reviewer



Art of the Possible



FURTHER INFORMATION

Website: [FinanceInnovation.nhs.uk](https://financeinnovation.nhs.uk)

Email: finance.innovation@nhs.net

LinkedIn: [One NHS Finance](#)

Twitter: [@OneNHSFinance](#)

ENDORSEMENT DISCLAIMER

The Finance Innovation Forum's Innovation Programme asks NHS Finance peer reviewers whether the "Innovation overcomes, successfully addresses, or solves the problem identified". The programme does not endorse, recommended or provide any assurance of software used or mentioned in any of the published innovations. If you think a published innovation is being used to falsely validate a commercial product or company please contact finance.innovation@nhs.net



One NHS Finance brings together the Future-Focused Finance, National Finance Academy, and the Finance Innovation Forum programmes and networks to make sure that everyone working in NHS Finance has access to skills, knowledge, methods, and opportunities to influence and enhance patient services.



Identifying and developing innovative ways of working and new areas of improvement.