

Streamlining Nursing Quality Data: Automating Analytics for Accelerated Quality Insights

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Problem

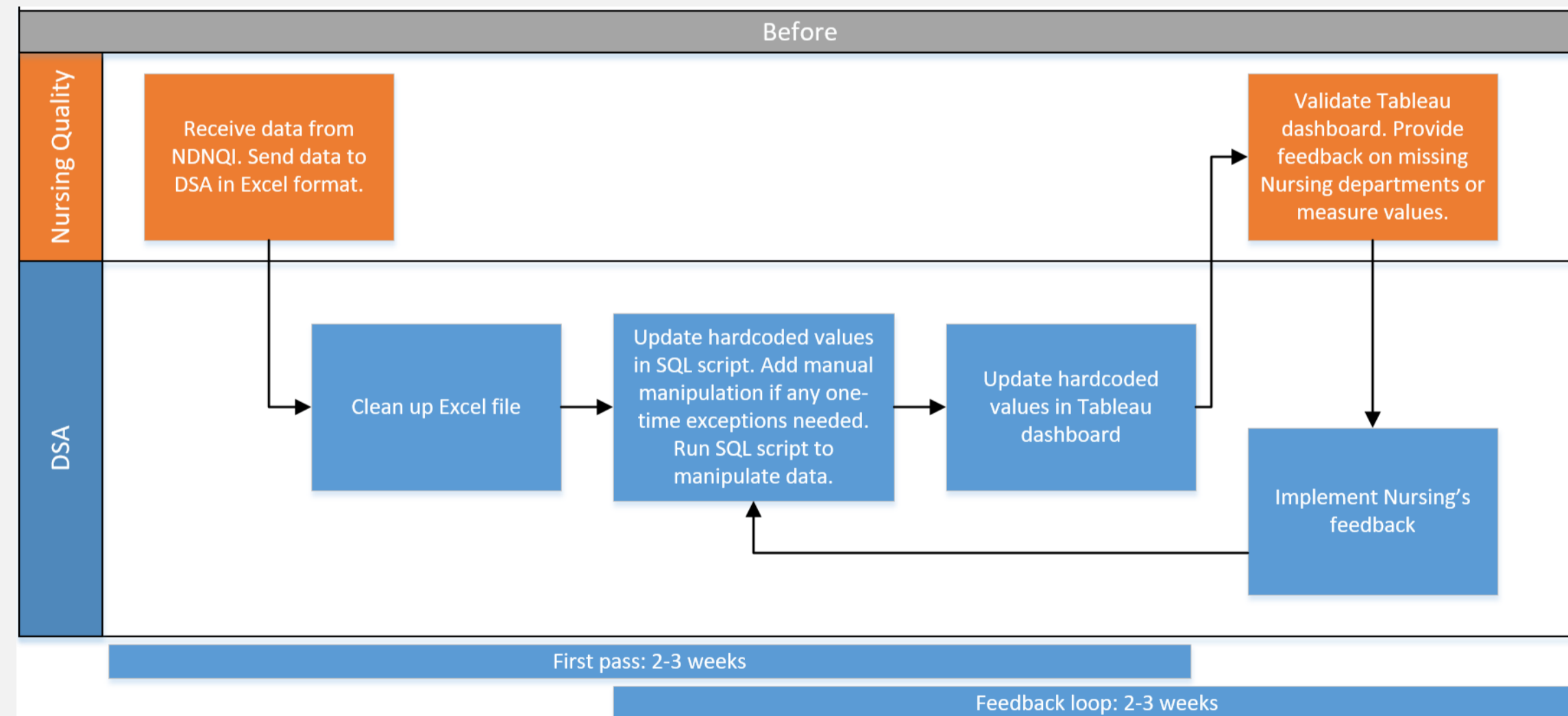
- UCM receives summarized Nursing Quality data from the National Database of Nursing Quality Indicators (NDNQI) every quarter. The data is needed to assess UCM performance compared to other academic medical centers that report to NDNQI. Additionally the data is used to track UCM performance according to Magnet standards. Insights guide quality improvements initiatives within nursing departments.
- Due to poor formatting, the volume of data, and unaligned data sources, it is difficult to quickly draw insights from the table provided by NDNQI. Historically, the report took weeks to transform into a usable format.

Goal

- Leverage analytics tools to automate, standardize, and undo hardcoding to reduce turnaround time from receiving the report to producing a visual representation of the data.

Strategy

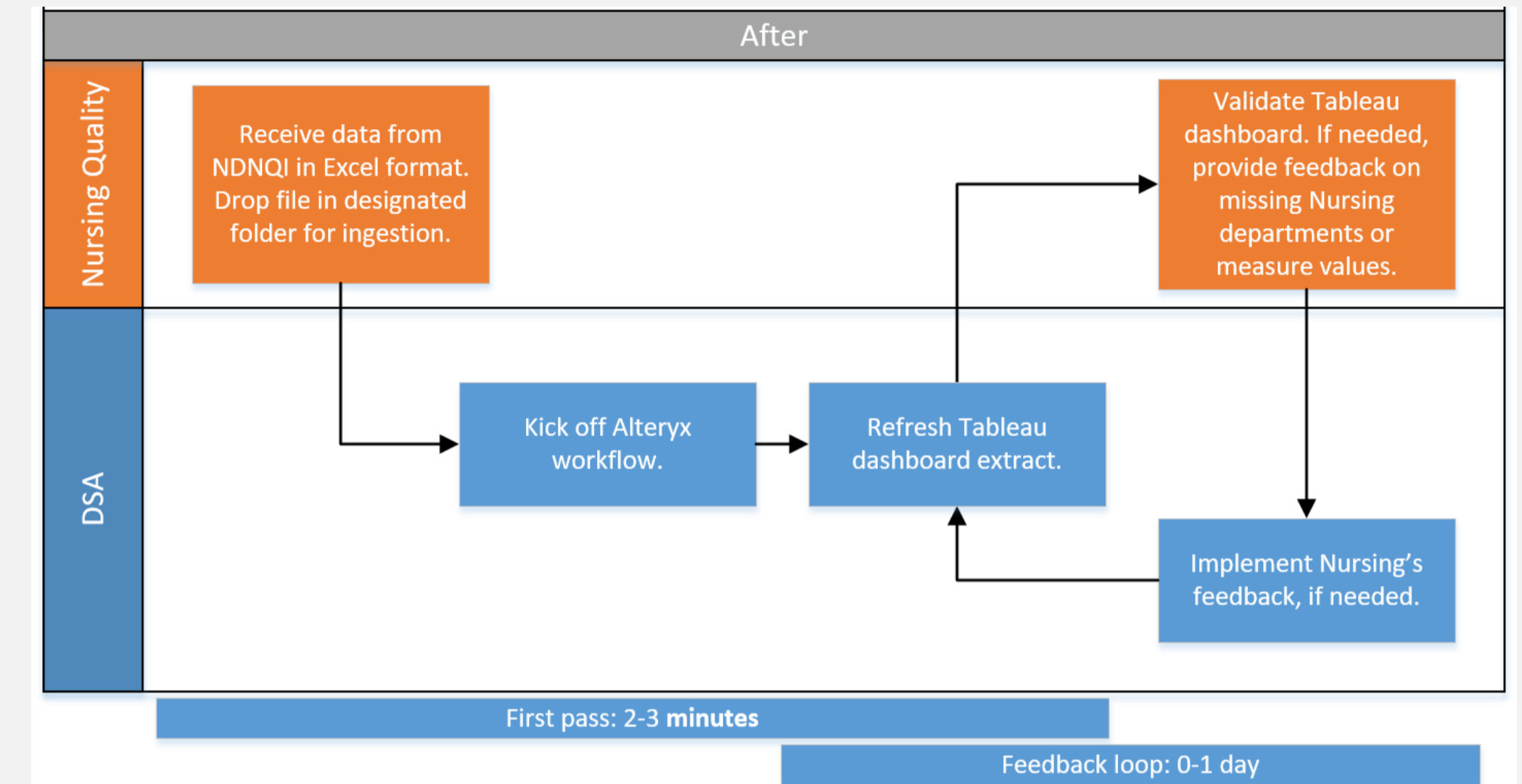
- Map the process from start to finish to understand all data dependencies and intricacies
- Measure success by overall reduction in turnaround time



- Standardize a mapping of Nursing departments between NDNQI and Epic Clarity through close collaboration between Nursing Quality and Data Science and Analytics teams
- Automate data cleansing using Alteryx to get a standard format for input data and reduce repetitive work
- Minimize hardcoded information in SQL scripts and Tableau dashboard to reduce time spent manually updating scripts that manipulate the input data
- Remove redundant calculations to reduce data processing run time

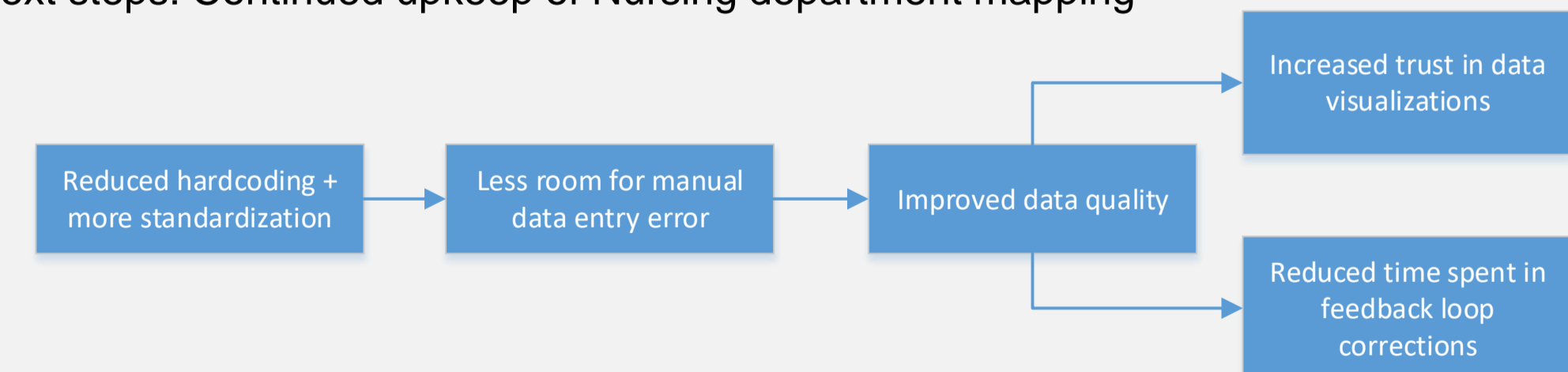
Results

- Consolidation into one workflow for easier tracking and maintenance
- Reduced total turnaround time from several weeks to several minutes



Lessons Learned and Next Steps

- Up front work to standardize and automate can provide significant time savings down the road
- Reduced hardcoding leads to improved data quality
- Next steps: Continued upkeep of Nursing department mapping



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