

## Process Optimization

When processing data, Langan teams and clients frequently perform routine calculations, functions, and formatting across multiple projects. The repetitive nature of these tasks provides a perfect opportunity for the use of templates and process automations to improve the efficiencies of projects.

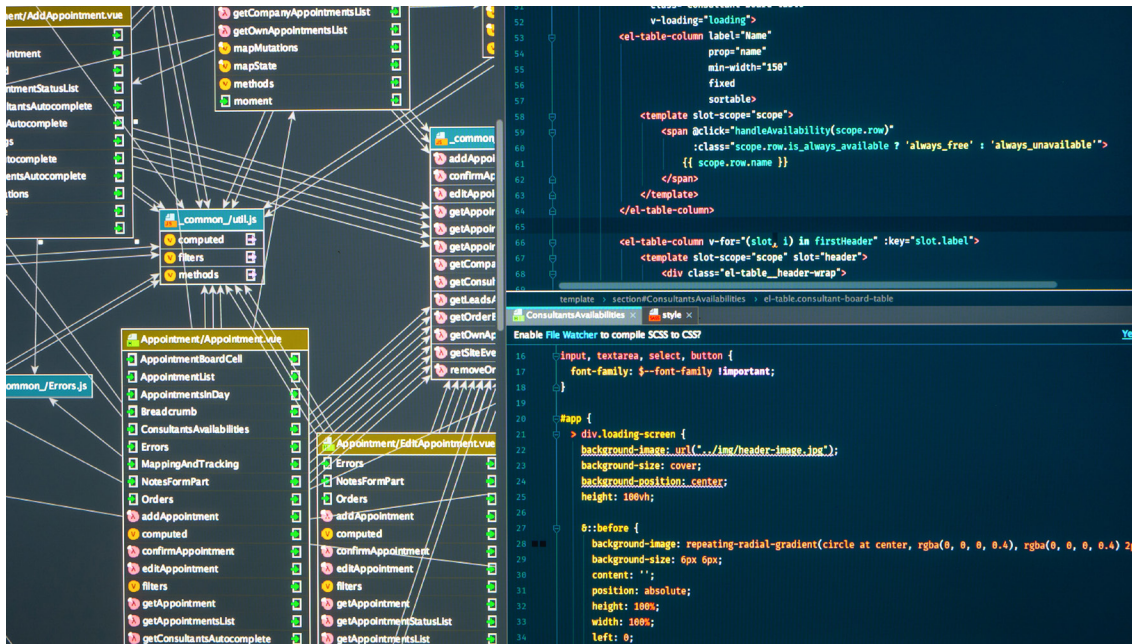


When presented with a task or formatting tool used repetitively in Microsoft Word or Excel, in or across projects, automation is an effective way to speed up these processes and limit manual errors. For example, if data is being received in a specific format and is being transformed and queried the same way over and over again, but the only component changing is the data itself, the Data Management and Analytics (DMA) team can work to develop a Macro (scripts that can be run in the Microsoft suite to perform pre-planned tasks) to automate the transformation and formatting of this data.

For base reports or spreadsheets that are consistent in or across projects, but require minor changes, such as names or values, a template can be developed. Templates, generally in Microsoft Word or Excel, can provide dropdowns, check boxes, and references to external data sources. Based on dropdown and checkbox selections, calculation settings and other requirements can be altered so that it is easy for values to be changed and calculations to be run.

Microsoft Word Templates can even be developed to pull information from an external Excel sheet. If, for example, clients have multiple sites or areas within a site that require almost identical reports, a template can be programmed to pull in the values for a given field from the external table based on a selected site.

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One use case for a confidential Langan project spanned approximately 75 lots. Each lot being developed required an individual report. The main changes required for each report were values relating to the lot details and required loads for development. The details for each lot were all kept in a separate spreadsheet from which the team was manually pulling information.

Before developing this template, each report could have taken staff approximately three hours to edit and finalize. With use of the macro, it now takes approximately one hour each, saving the team about two hours per report. The template provided an estimated cost saving of about \$25,000.

Using macros and developer tools in Microsoft Word, a template was developed so staff could select the lot number for the report, and the correlating numbers are pulled into the document.

These tools have proven to expedite turnaround times and advance project deadlines, while limiting manual errors and enhancing the quality of data deliverables to clients.



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