The goal of this thesis was to design and implement a graphical editor for workflow modelling, focusing on productivity, simplicity and usability for the common user. The resulting application is integrated into the FlowOpt project, in which the workflows can be used to manage manufacturing processes in small and medium size factories. The workflow editor should serve among other things as a proof of concept of practical usability of the Nested TNA workflow model. The main parts of the thesis include a working implementation of the editor, a procedure for automatic verification of the workflows and support of the XPDL (BPMN) standard for saving workflows.