

COVID-19 Epidemic impact modelling for Construction Projects

Acumen Feature Playbook

3/30/2020

COVID-19 Epidemic impact modelling

Introduction

In support of our customers worldwide Deltek would like to share a number of methods to model the current and future impacts of the Covid-19 epidemic on Project schedules using several modules of Deltek Acumen.

Key Features

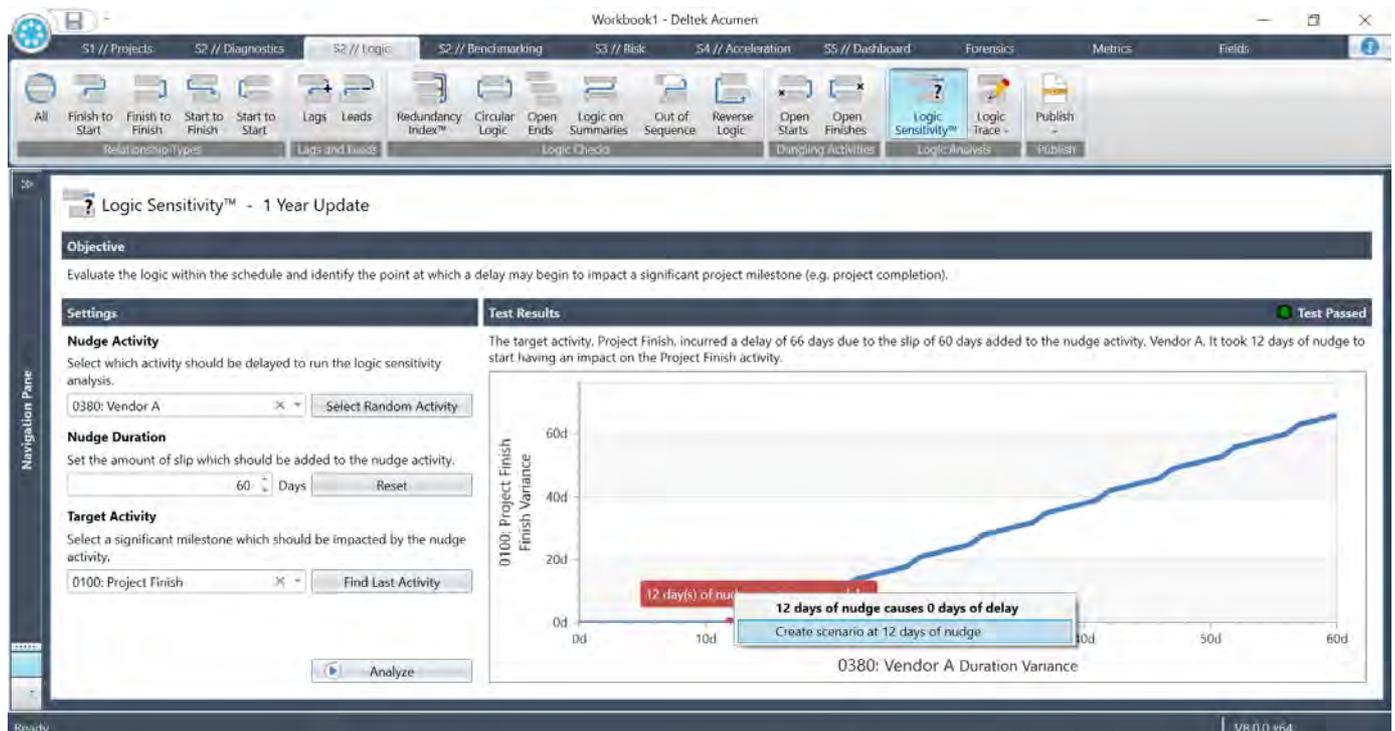
Using Deltek Acumen Project Controls teams are able to:

- Simulate the current impact of Project delays caused by COVID-19 and assess contractor claims against key milestones
- Re-baseline projects considering the future impact of COVID-19 in a number of different ways depending on what modules the customer has
- Analyze schedule acceleration scenarios to recover time

This guide walks through each of these capabilities using screenshots. Please contact us if you would like to go through them in real time.

Current Impact Simulation

By using the Logic Sensitivity feature within Acumen Fuse users are able to assess the impact of project delays on the project end date or any key milestone. This is particularly useful to assess contractor claims. Once the delay has been modelled the user can create a new Project Scenario for further analysis or export back to the planning tool.



Re-Baseline Project Options

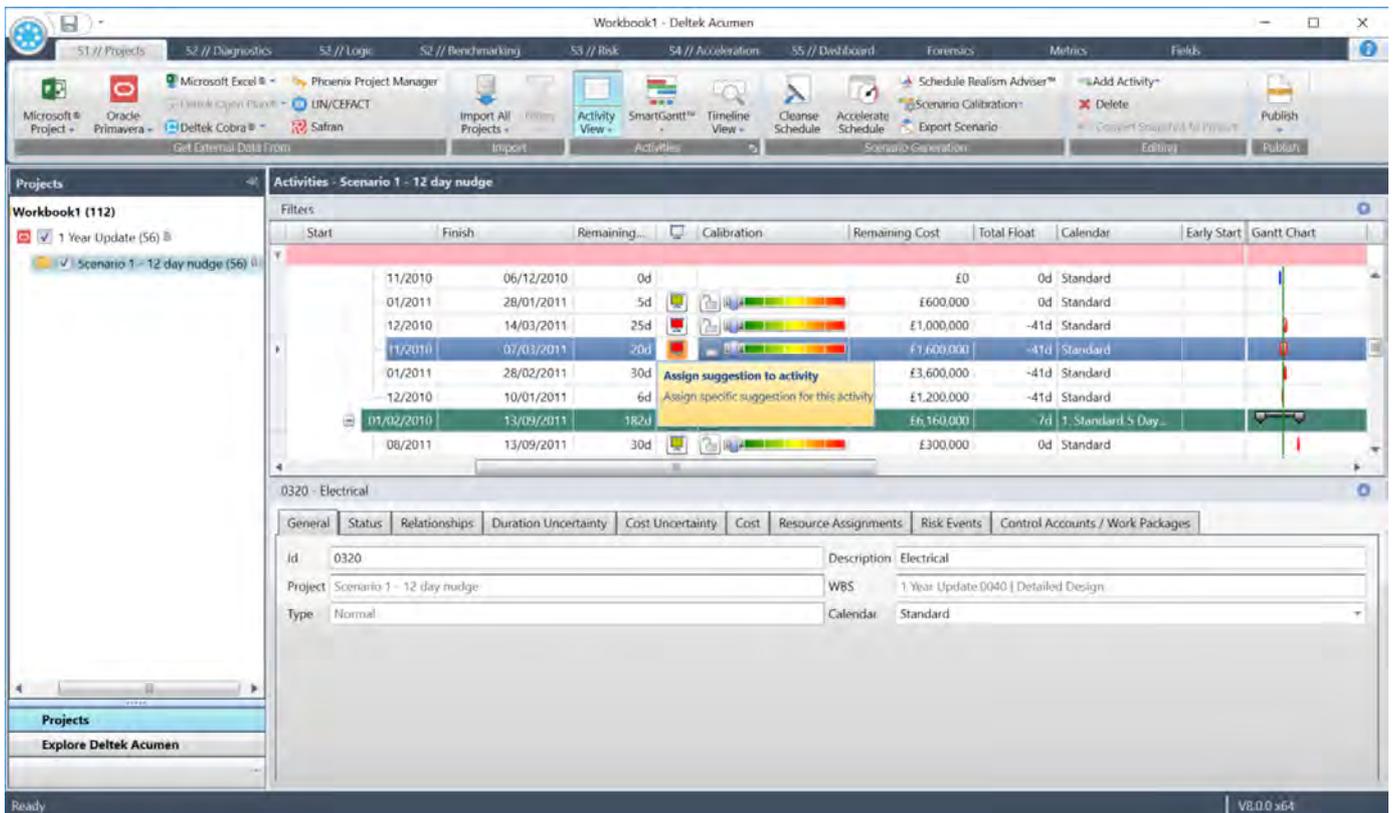
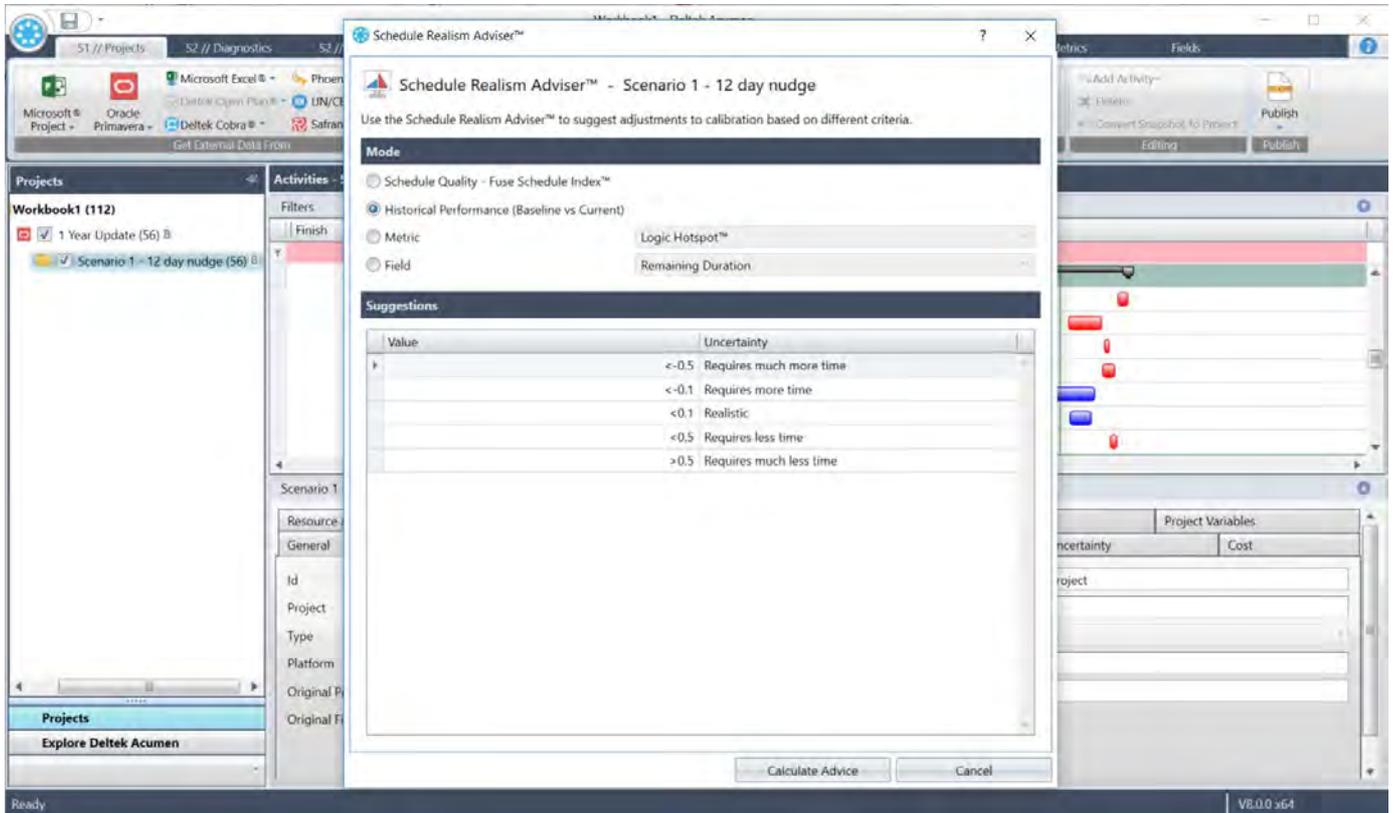
Following the assessment of known project delays users may want to re-baseline the schedule to include contingency for future COVID-19 related slippage. This can be accomplished in a number of different ways in Acumen depending on the modules the user has purchased. Best practice is to model the risk as a specific calendar event and duration uncertainty but for non- Acumen Risk users it is also possible to model the duration uncertainty using the Acumen Schedule Realism Advisor. It is possible to model uncertainty based on project performance to date.

- A. Risk Users using Triangular Risk Events (Threats) or Risk Windows (remember you have the option from preventing the split of activities during that period)

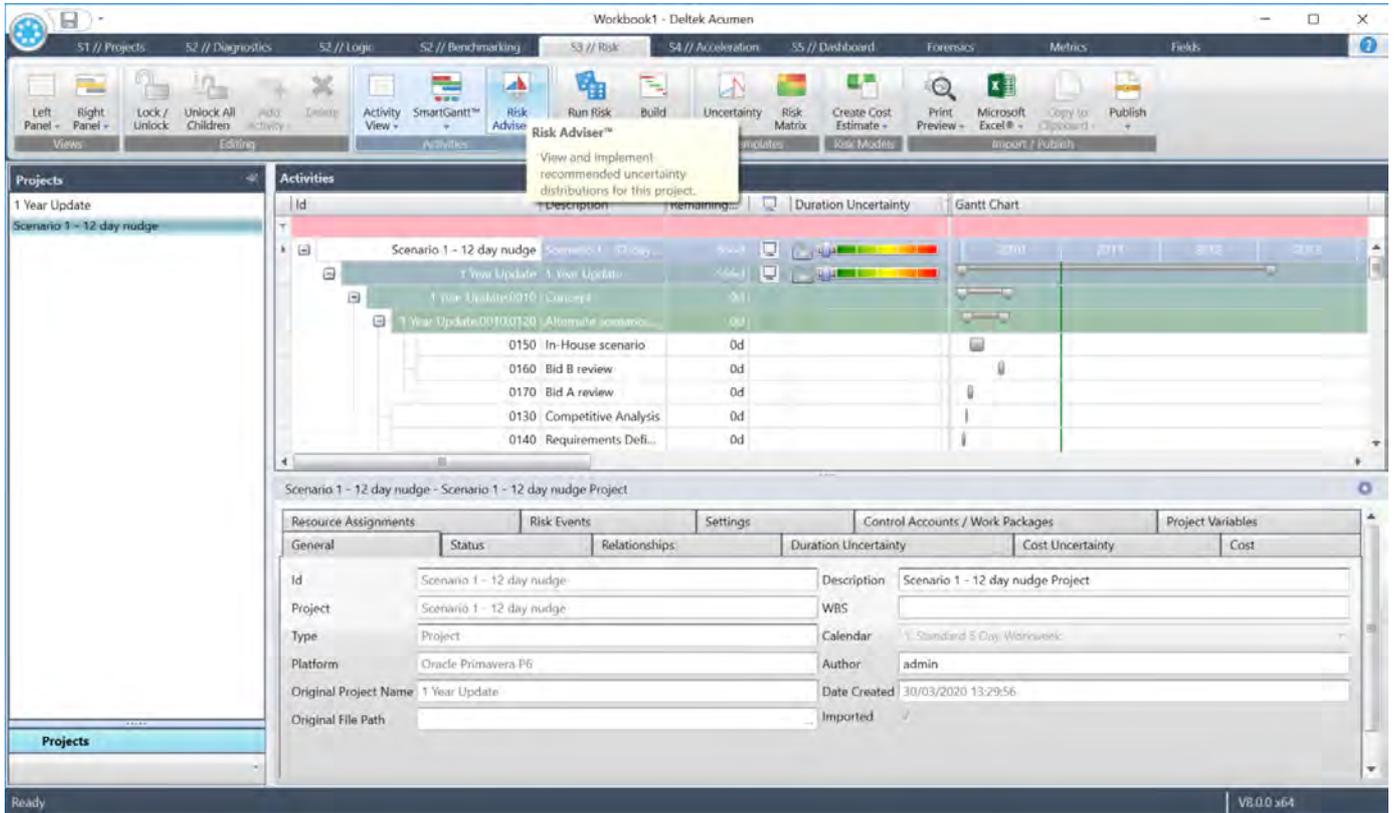
The screenshot displays the Deltek Acumen software interface. The top menu bar includes options like 'S1 // Projects', 'S2 // Diagnostics', 'S3 // Risk', 'S4 // Acceleration', and 'S5 // Dashboard'. The main workspace is divided into two primary panels:

- Risk Register:** This panel shows a table of risks. A risk named 'Pandemic' (ID: R1) is selected. Below the table, the 'Details' tab for this risk is visible, showing it is a 'Risk Window' with a start date of 30/03/2020 and a finish date of 30/04/2020. The 'Prevent activities from splitting across the event/window' checkbox is checked.
- Activities:** This panel shows a list of project activities. Several activities are highlighted in green, indicating they are impacted by the selected risk. These include '1 Year Update' (556d), '1 Year Update-0030 FEED' (52d), '1 Year Update-0040 Detailed Design' (51d), '1 Year Update-0050 Procurement' (182d), and '1 Year Update-0060 Manufacturing' (74d). Each activity row shows its ID, description, remaining duration, and a progress bar.

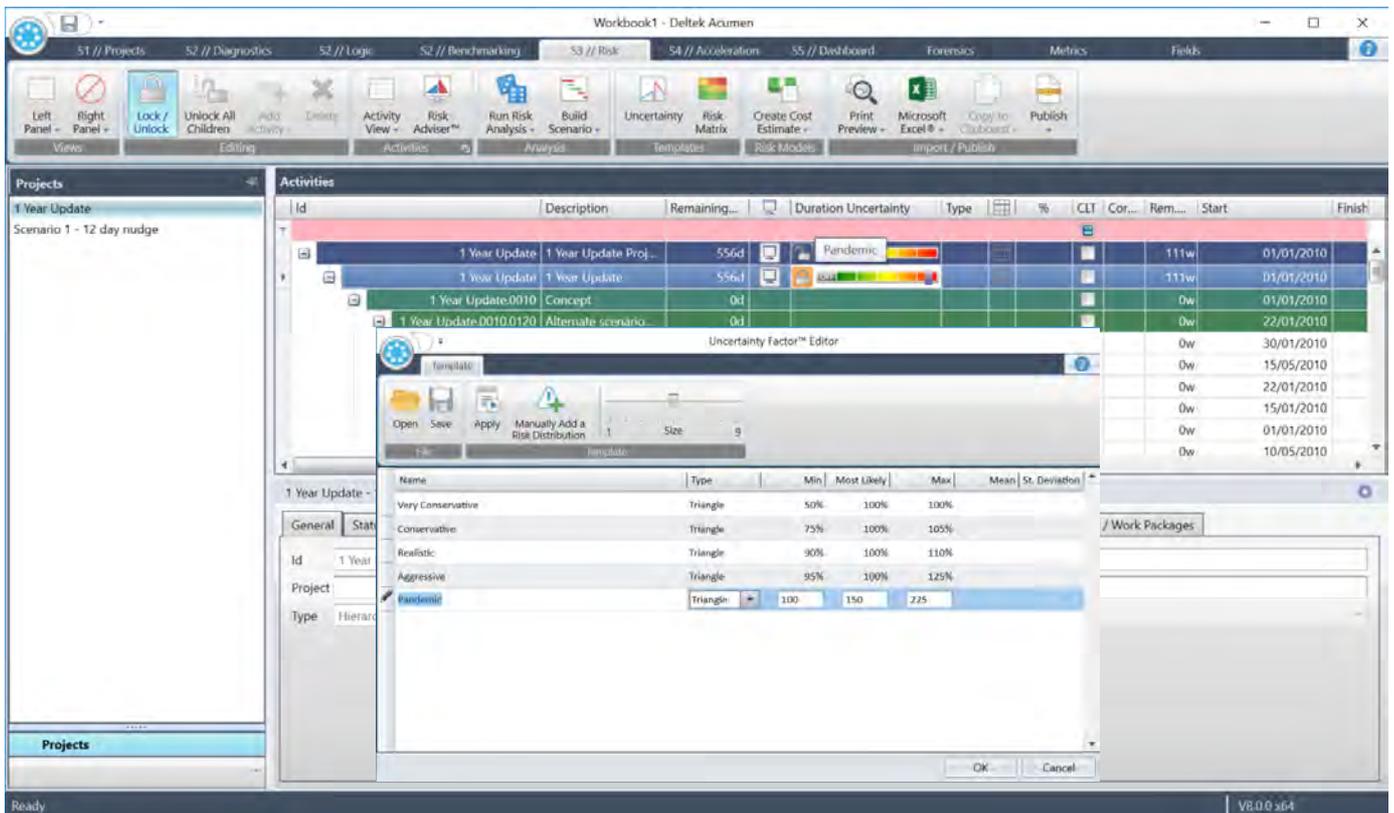
B. Fuse Users using Schedule Realism Adviser



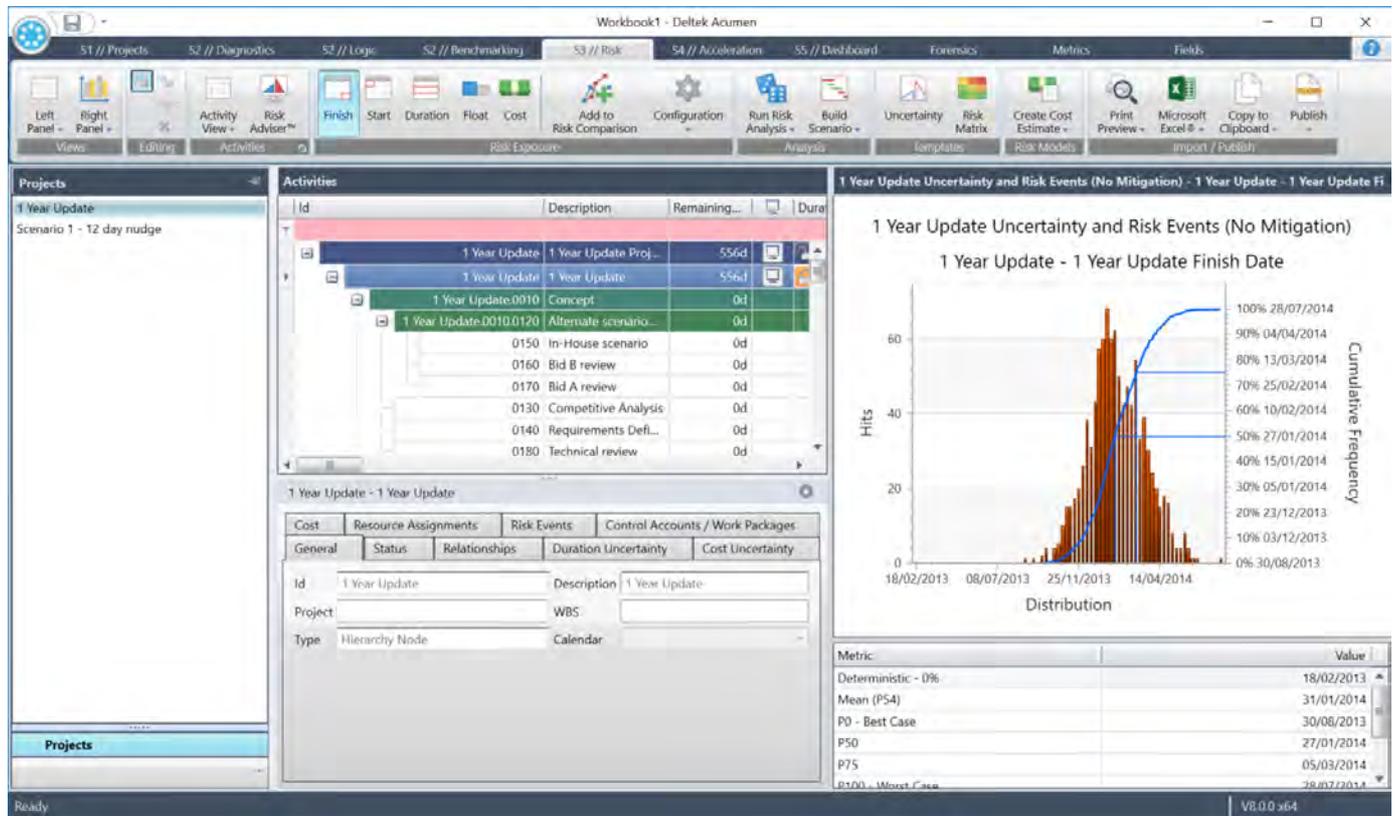
C. Risk Users using Risk Adviser



D. Risk Users using Duration & Cost Uncertainty for activities past the data / status date



Using Acumen Risk users are able to generate a new schedule based on a confidence level of Risk similar to the report shown below:



Schedule Recovery/Acceleration

The final step in our recommended process is to assess Schedule Recovery options using Acumen 360. Acumen 360 allows users to workshop options for Acceleration by building a set of scripts and filter sets (e.g. users can filter in or out certain types of activities).

Our recommendation is to use:

- Front loaded acceleration scripts in you are in the early stages of your project
- Back loaded acceleration scripts if you are past 50% of the execution phase

