Innovyze®

5 Ways InfoWorks ICM Can Help You Work More Efficiently

From model development and simulation runs, InfoWorks ICM is designed to help the user streamline ongoing projects and data intake. It provides a digital representation of the natural and constructed environment surrounding your sewer and stormwater networks so you can confidently manage your systems.

Using InfoWorks ICM, you can **improve speed, analysis and collaboration** with its workgroup database, data inferencing, meshing and GPU utilization. Here are the **5 ways InfoWorks ICM can help you work more efficiently:**

1. Validation and Data Flagging

The workgroup database in InfoWorks ICM allows users to maintain a complete history of their model and with an unlimited number of undo and redo actions, hydraulic modelers will be able to **quickly build a model, in-spite of errors that might occur during the process**.

Along with these features, validation is built-in and can be programed in using SQL, so as data changes, users can be sure the information associated with model elements make sense and will produce a sound, working model.

Data flagging rounds out the workgroup database functionality by allowing users to flag model information either by how it was brought into the model (GIS, Inferenced, etc.), or by whom updated it. **This provides an unprecedented level of transparency** for users who pick up modeling tasks from others.
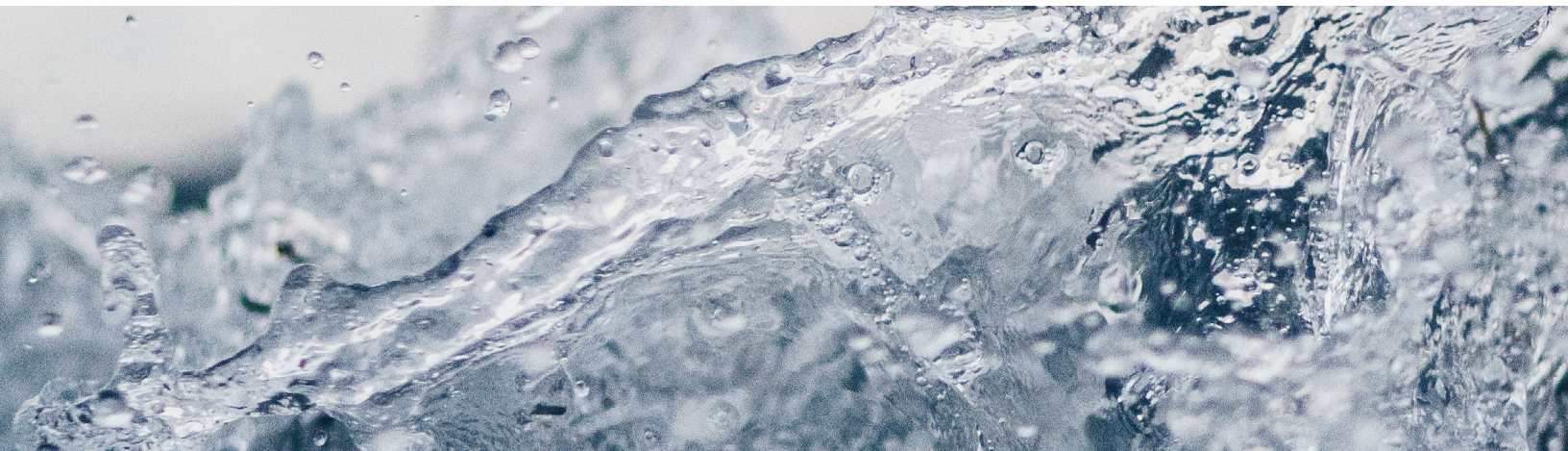
2. Data Inferencing

Typically, raw survey data being used to build hydraulic models will often be missing certain necessary elements for the model to run accurately. Infoworks ICM has **built-in data inferencing tools to fill in these gaps** such as missing shapes and sizes of pipes, or ground and cover levels. These tools can be used quickly and easily to fill in data gaps, most commonly, found in survey data but also necessary to run the model accurately and efficiently. Plus, based on the geometry and orientation of the pipes, you can configure head loss types and coefficients.

3. SQL and Other Scripts

InfoWorks ICM allows the use of SQL to export information from the model or streamline building the model. Often, repetitive tasks are required in building a model or updating it to a proposed or future condition.

With SQL queries, these **laborious and tedious tasks can be automated to speed up the process and ensure that data entry errors are minimal**. SQL queries can be used for everything from adding new scenarios to assigning sub-catchments to their nearby nodes, to creating your own inferencing tools.

Equally, as you know, reporting and pulling results can be a tedious task. SQL queries can be used to select nodes, pipes, and other model features with certain model results to highlight capacity problems or CSOs/SSOs occurring during a simulation.

Once these queries are built in the database, they can be used across any model or results within the database making them an incredibly flexible and powerful set of tools.
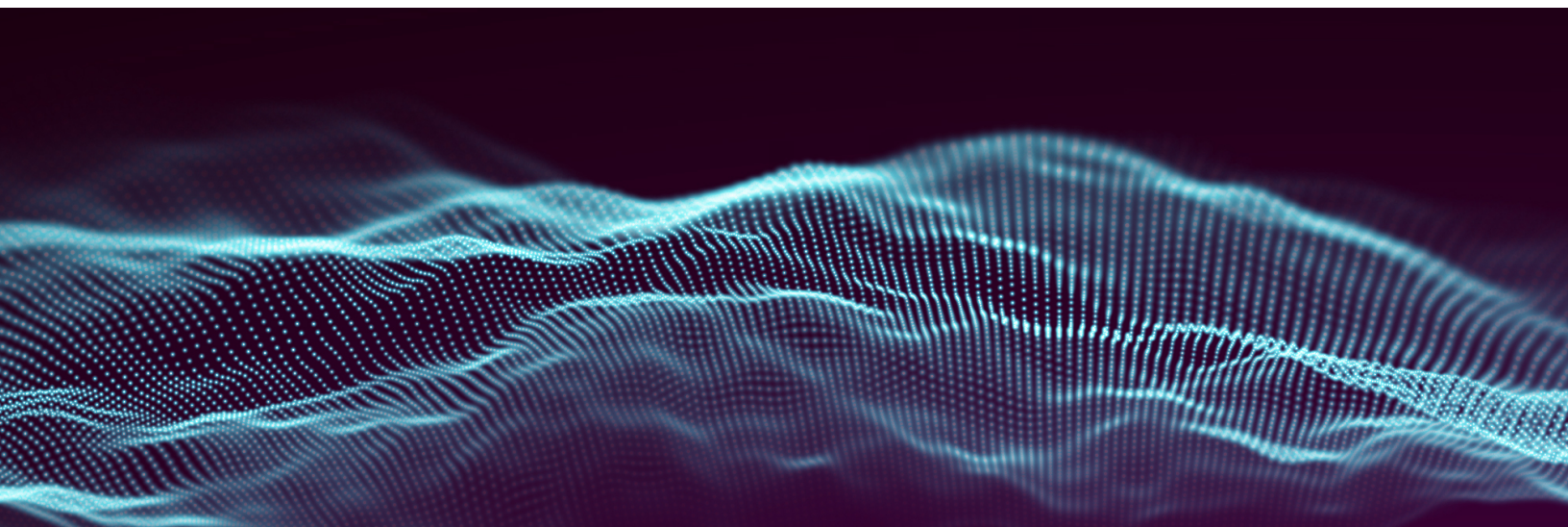
4. Model Data Management

In addition to the data flagging and validation, the workgroup database also provides the **foundation for better model data management.** The workgroup database is unique to anything else on the market for hydrologic and hydrologic analysis by allowing multiple users in the modeling database at the same time, the ability to go back to previous versions of a model and incorporating a variety of different data sources including other models, GIS data, and time-series data (radar rainfall, pump status, flow meters, etc) seamlessly.

By incorporating everything you would need for a complete H&H and connecting these sources directly, you'll be less susceptible to errors made during data transfer and data manipulation needed to transfer that information from one source into your modeling software.

All of this combined allows for **more collaboration across entire organizations and better model data management**. When you increase collaboration, you're able to work more efficiently because you're now able to leverage the knowledge and expertise of multiple people to provide the best product. When you improve model data management, you spend less time transferring data, less time figuring out where data came from, and less time fixing errors that creep in when you have to extract it and re-format it.

5. Remote Runs and GPU Utilization

Hydraulic simulations, depending on their complexity, can take hours or even days to complete. In addition to InfoWorks ICM 's inherently **fast and accurate simulation engine**, simulations can run remotely so your workstation isn't compromised in the process. Instead of relying on and consuming the hardware resources on a typical desktop computer, a high-powered server can be used by an entire organization to **provide much faster simulations**.

Additionally, GPUs can be used to speed up the 2D portion of the simulation. Using GPUs can speed up the simulations 12x or more with very large models with many 2D elements showing the **most significant improvements in reducing run times**. With InfoWorks ICM you have advanced and fully integrated 1D/2D modeling, flexible data exchange, and real-time user control right at your own fingertips.

Working with improved access, speed and collaboration you can effectively manage storm and sewer networks knowing flood risks are being mitigated, water quality is kept clean and your using project time productively and efficiently.

Eliminate doubt from your plans, speak with an expert to learn more or request a demo today!

LET'S CHAT
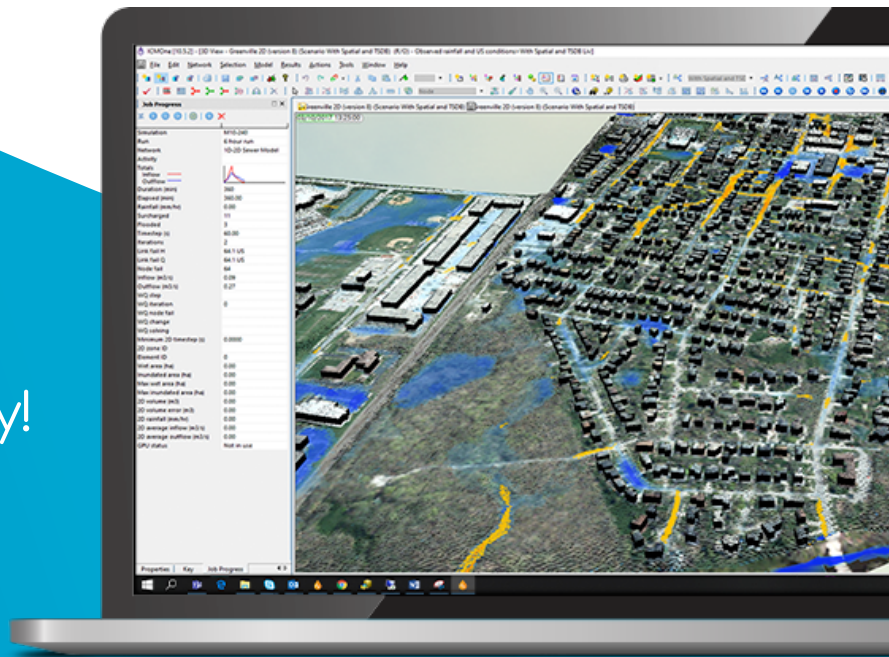
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