Overall Input

Q: causal query
D_O: observational and/or,
D_I: interventional data
G: prior Knowledge on network
M: estimation method

Overall Output

$\hat{Q}$: estimated and verified value of the query

Causal workflow

Step 1 input
D_O and/or D_I, G

Step 1 output
G': repaired network

Step 1 : Repair the network structure
Add a bi-directed edge between variables when conditional independencies implied by the prior network contradicts with the ones indicated by data.

Step 2 input
G', D_o , D_I , Q

Step 2 output
True or False

Step 2 : Check query identifiability
If query is identifiable proceed to the following steps.

Step 3 input
G', Q

Step 3 output
G'': simplified network

Step 3 (optional): Simplify the network
Mark all the nuisance variables that cannot be part of the query estimation (e.g., descendants of the outcome) as latent. Apply simplification rules.

Step 4 input
G' or G'', Q , D_o , D_I, M

Step 4 output
$\hat{Q}$: estimated query

Step 4 : Estimate the query
Generate the estimand and proceed to estimate the query using the selected estimation method.

Step 5 input
G' or G'', Q

Step 5 output
G''': simplified network

Step 5 (optional): Further simplify the network
Mark rest of the nuisance variables that are not part of the estimand as latent. Apply simplification rules.

Step 6 input
G', $\hat{Q}$, D_o, D_I

Step 6 output
verified $\hat{Q}$

Step : Verify the correctness of the result with respect to external evidence