SHAPE self-check

Five questions for your next analysis. In each row, tick the highest level your workflow reaches today; the next box is what to aim for. SHAPE is not a sequence: rate every row, and rate again in a few months to see what changed.



WORKFLOW _____ **RATED BY** _____ **DATE** _____

THE QUESTION	0 NOT YET	1 WRITTEN DOWN	2 AUTOMATED	3 CHECKED
S STRUCTURE STAGES **Can you explain what each part does?**	☐ Steps live in someone's head.	☐ Each stage is named in a README, with its purpose, inputs and outputs.	☐ Each stage is its own script or target with declared inputs and outputs.	☐ A check fails when a stage reads or writes beyond what it declares.
H HARMONIZE HANDOVERS **Can the next tool or person use this correctly?**	☐ Files are handed on without saying what they contain.	☐ A data dictionary describes every file, column, unit and format.	☐ The code writes each output with the agreed names and format.	☐ The recipient validates each handover before using it.
A AUTOMATE ACTIONS **Can this be rerun without rebuilding manual steps?**	☐ A manual fix is never written down.	☐ The procedure, its settings and software versions are written down.	☐ One command reruns everything, with the settings in a file.	☐ A rerun on the same inputs is checked to give the same results.
P PROPAGATE PROVENANCE **Can you trace every step that led to this result?**	☐ A figure can no longer be traced back to its data.	☐ Results are under version control, with a note on how they were made.	☐ Every run records its inputs, settings, software and who ran it.	☐ The record travels with the result, and a gap in it is caught.
E EVALUATE EXPLICITLY **How would you notice that something went wrong?**	☐ Nobody notices when something goes wrong.	☐ Acceptance criteria are written down before the work begins.	☐ Checks of inputs, outputs and assumptions run with every run.	☐ A failed check stops the work and is reviewed and recorded.

OUR NEXT STEP _____

ROOT the tools. SHAPE the workflow. FAIR the data.

SHAPE: Deliberate Workflows, version 0.9.11. Lukas C. Bossert, RWTH Aachen University IT Center.
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