## Output 1: CR Formality

Although CRs are effective over a broad range of project types and sizes, the resources and effort needed to conduct reviews can differ from project to project, and for some projects, the effort can be substantial. Therefore, when devising a CRP for a particular project, an appropriate balance must be struck between the potential benefits of conducting CRs (e.g., refined project designs, enhanced construction efficiency, and reductions in disputes, cost overruns and delays) and the time and effort needed to conduct the reviews.

The tool considers three approaches (or levels of formality) for conducting a CR:

- **Informal CRs:** An Informal CR mainly relies on project team experience and in-house inputs. The process itself may be largely ad hoc, with minimal use of analytical tools or strict adherence to prescribed policies and guidelines. Perhaps a checklist is utilized.

- **Semi-formal CRs:** A Semi-formal CR will generally incorporate more analytical tools and resources to review and document a project's constructability. Meetings of those involved will be scheduled, but tools and procedures will be limited, as will the number of meetings.

- **Formal CRs:** A formal CR will strictly adhere to detailed policies/guidelines/procedures to comprehensively evaluate and document a project's constructability. Meetings will likely commence earlier in the process, and be held more regularly.

As conceptually depicted in the figure below, the tools, resources, and frequency of reviews increases with increasing CR formality. (Note that Outputs 2, 3 and 4 provide more specific recommendations regarding CR tools, team composition, and frequency of CRs.)
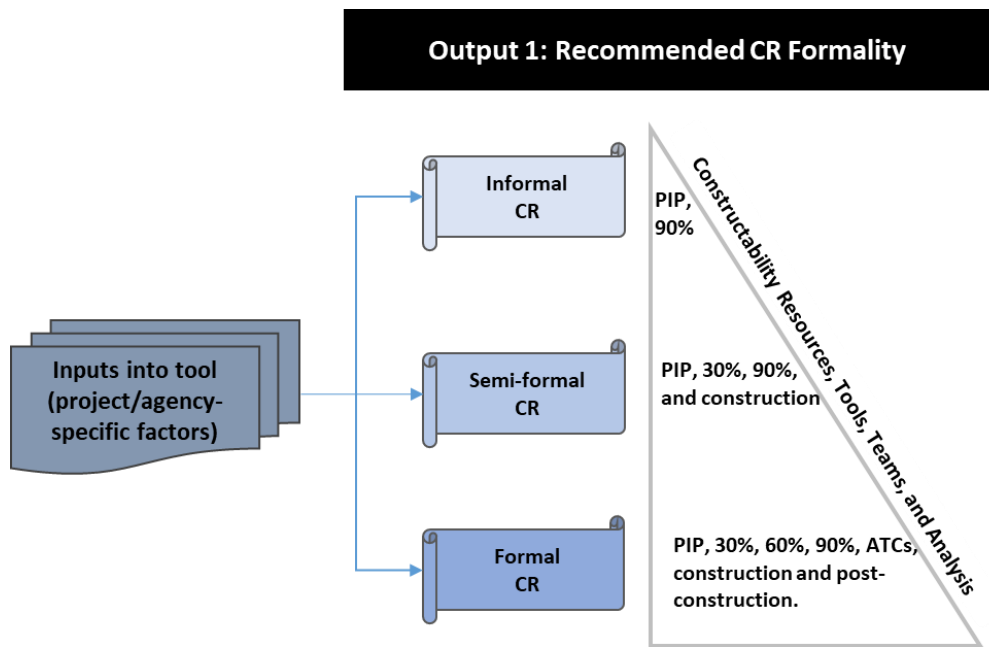
Typical attributes associated with each CR approach are summarized in the table below.

Attributes	Constructability Review Levels		
	Informal (Low)	Semi-Formal (Medium)	Formal (High)
Constructability Guidance	NO	Partially	YES
Construction Inputs Source	In-House	In-House, and some outsource	In-house, Industry Inputs, and Consultants
CR Milestones (CR along PDP)	PIP and 90% design	PIP, 30%, 90% design and CC	PIP, 30%, 60%, 90% design, ATCs, CC and PC
Performance Tracking	Document claims only	Track B/C only	Track B/C and KPI
Lessons Learned Database	Document lessons learned	Document lessons learned with Limited tracking	Comprehensive documentation and tracking
CR Tools	Design Team Experience	CRs Checklists, 3D models	CR Checklists, nD Modelling, VR, and databases
CR Coordinator (Champion)	Project Engineer	1 Part-time	1 Full-time
CR Responsible Team	Design Team	QA/QC Team & VE OR DB/CMGC	Special Multi-disciplinary team OR DB/CMGC