

effect	effect's goal level influenced by	promoted and inhibited process variants
desired	better code quality	<ul style="list-style-type: none"> + selection of reviewers with a grasp for architecture and the larger context + selection of reviewers with knowledge of the used libraries (to spot duplicate code)
	finding defects	<ul style="list-style-type: none"> + long-term thinking + inexperienced/heterogeneous developers + frequent need to change old code + code standards and rules as check baseline + complex or large codebase - separation of developer responsibilities (e.g. one developer per module) - "features are everything" culture
	learning of the reviewer	<ul style="list-style-type: none"> + comparison with a reference (e.g. requirements document) + selection of reviewers with high knowledge of the reviewed module + understanding of the changes (not just skimming) + checking of tests + following up on issues, re-review - permanent, face-to-face interaction
	learning of the author	<ul style="list-style-type: none"> + large differences in knowledge levels + collective code ownership + complex or large codebase - separation of developer responsibilities - small, well-rehearsed team - alternative knowledge transfer measures
	sense of mutual responsibility	<ul style="list-style-type: none"> + permanent, face-to-face interaction + selection of reviewers with more/different knowledge than the author + positive remarks + early feedback + reviews (even) for exercises or tutorials - "fixing on the fly" by the reviewer
	finding better solutions	<ul style="list-style-type: none"> - separation of developer responsibilities
	complying to QA guidelines	<ul style="list-style-type: none"> + permanent, face-to-face interaction + positive remarks
undesired	staff effort	<ul style="list-style-type: none"> + no discussion of designs before implementation + doubts regarding a specific solution (individual level)
		<ul style="list-style-type: none"> + like stated in the guidelines + documentation of reviews (e.g. by documenting issues)
	<ul style="list-style-type: none"> + review effort not considered in plan + high work pressure + feature-oriented culture + consultant/contractor relationship 	<ul style="list-style-type: none"> + distribution of review effort on larger reviewer population + pull-based assignment + varying intensity of checks + early feedback - higher number of reviewers - face-to-face interaction (meetings) - very small reviews (too much overhead)

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undesired	increased cycle time	<ul style="list-style-type: none"> + process measures to reduce waiting reviews (WIP limit, prioritization, ...) + fixed integration into the development process + selective rework - face-to-face interaction - higher number of reviewers - sequential review - very large reviews (other tasks will be stuck in the meantime)
	offending the author	<ul style="list-style-type: none"> + face-to-face discussion of issues + small number of reviewers + objective and fair rules for review (e.g. reviews for every change) + private communication of issues + taking care when phrasing issues
	varying results	<ul style="list-style-type: none"> + checklists + higher number of reviewers + processes depending less on human judgment

Note: A plus sign in front of an influencing factor means “makes this effect more important”, a minus sign means “makes this effect less important”. A plus sign in front of a process variant means “is promoted when this effect is more important”, a minus sign means “is inhibited when this effect is more important”.

This table belongs to the research article “Factors Influencing Code Review Processes in Industry” by Tobias Baum, Olga Liskin, Kai Niklas and Kurt Schneider (Leibniz Universität Hannover).