

Category	Challenges that may impede developer satisfaction and productivity
Management	<ul style="list-style-type: none"> - Poorly defined goals - Manager [Beecham et al. 2008]
Organization	<ul style="list-style-type: none"> - Lack of vision
Team	<ul style="list-style-type: none"> - Poorly qualified co-workers [Graziotin et al. 2017] - Team culture [Beecham et al. 2008]
Personal productivity	<ul style="list-style-type: none"> - Technical competency [Judge et al. 2001]
Work type/impact	<ul style="list-style-type: none"> - Unclear requirements - Legacy code - Poor software architecture - Too many external dependences - Development stack/architecture - Interacting with people
Engineering systems and processes	<ul style="list-style-type: none"> - Poor software development processes [Beecham et al. 2008] - Poor engineering tools [Wagner & Ruhe 2008, Wagner & Ruhe 2018] - Poor hardware resources [Beecham et al. 2008] - Poor collaboration tools [Beecham et al. 2008] - Too many emails [Meyer et al. 2014] - Too many meetings [Meyer et al. 2014] - Too many communication channels [Meyer et al. 2014]
Training/documentation	<ul style="list-style-type: none"> - Insufficient training [Beecham et al. 2008] - Finding relevant information [Wagner & Ruhe 2008, Wagner & Ruhe 2018]
Working environment	<ul style="list-style-type: none"> - Too many interruptions [Meyer et al. 2014] - Lack of quiet space for work [Meyer et al. 2014]
Work life/work experience	<ul style="list-style-type: none"> - Time to do required work

Table of challenges we considered in our study, and their origin.
Challenges in plain text were found in the literature (indicative references in brackets).
Challenges in red came from coding responses to open-ended questions in the Spring survey.