Benefits to MBS Developer

The Model-Based Standard’s developer is one of the biggest beneficiaries of the solutions identified in this paper. Agile methods and continuous deployment paired with enhanced requirements traceability will bring many benefits to the developer, including:

* Immediate feedback loop to detect and fix issues early
* Increase transparency and visibility to other developers and team members
* Avoid “integration hell”
* Improve quality and testability

The feedback loop is probably the most important aspect to a developer. A NIST study on the Impacts of Inadequate Infrastructure for Software Testing shows that 45% of errors are found in the integration stage of development. And if the integration activities occur at the end of the publication cycle – the rework increases tremendously. (Tassey, Gregory, 2002).

Teams with continuous delivery spend 50-70% less on problem resolution. (Benmoshe, n.d.) Another study of 34,000 open source projects found that teams that use CI, “release twice as often and have developers who are less worried about breaking the build.”(Hilton, Tunnell, Huang, Marinov, & Dig, 2016) A developer will no longer struggle with not having clear and complete requirements – thus reducing rework and wasted time. They can have confidence that the solution they are designing meets the customer's requirements [due to clear traceability to the user story and requirements] and that they have designed a complete solution through the different layers of the data model. By automating the integration and publication processes, the developer will have immediate feedback on the quality of their work and can make adjustments straightaway. The Product Increment Planning event and managed blacklog will provide clear statement of work so that the developer can schedule their time supporting the iterations.

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