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| Software Process Mining |  |

Software Process Mining intern working with Infosys Labs requests your help. Please complete the following survey based on your valuable experience.

While Managing Projects…

**We have identified some process related problems encountered by practitioners while managing IT projects. In your opinion, please indicate how important is it to have a process mining team solve this problem.**

## Avoid putting efforts on LESS SIGNIFICANT ACTIVITIES by identifying redundant or unnecessary steps of process.

Benefits:

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## Automatic ADAPTION OF PROCESS according to different project specifications that is, design process based on knowledge of similar successful projects instead of selecting process only on the basis of experience.

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## Design of more meaningful QUALITY METRICS by understanding runtime process practices to precisely identify the scope of improvement.

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## Uncover DEVIATIONS between the actual process followed by the team and the defined process, their cause, impact on overall outcome and identify set of people exhibiting more deviations.

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## Approvals are part of software development lifecyle (SDLC) and need better management. Design a process for seamless approvals to reduce delays.

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## Mechanism for CONTINUOUS PROCESS EVOLUTION based on best practices of individuals who exercise the process. Therefore, we improve process by encouraging on-the-job learnings of people rather than dependence on process designers.

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## Facilitate BETTER INTEGRATION between different silos by reconstructing the process thus, reduce rework happening due to differences in understanding.

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## Need for efficient TASK ALLOCATION mechanism by considering individuals’ skills, interests, and expertise as well as team compatibility for better utilization of resources.

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## Identification of BOTTLENECKS and inefficiencies causing delay to take remedial actions and have better estimation in future.

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## During issue resolution, detection of PING-PONG patterns due to bug tossing between developers to reduce resolution time.

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## Inspection of REOPENED issues to identify the root cause and recommend verification for future issues based on learning from issues reopened in past.

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## Enable early detection and PREVENTION OF DEFECTS instead of fixing them during the later stage by understanding patterns of escaped defects.

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## Investigate the LEAD TIME for issue resolution by analyzing issue resolution process from TIME PERSPECTIVE. Therefore, we can have timely resolutions.

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## Improve effectiveness of CODE REVIEW PROCESS AND STANDARDIZATION by redesigning check list and updating code analyzers based on the defects reported during testing.

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## Facilitate in-depth understanding of point where things went wrong by deriving and understanding actual process at MORE GRANULAR LEVEL.

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## Equip novice with the KNOWLEDGE OF EXPERIENCED PRACTITIONERS by associating efficiency of adopted process with the experience of practitioners.

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## Handle CHANGING TEAMS seamlessly by analyzing interaction pattern between team members and team dynamics.

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## PEOPLE VS PROCESS: Identify which factor contributed to what extent towards the success and failure of project.

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## Analyze code review lifecycle to identify developers who are not reviewing their code properly before they submit for external review and what are the deviations from defined checklist. It will help take corrective actions and reduce defects during testing phase.

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## Relate bugs with the ACTUAL STAGE OF INCEPTION by understanding issue resolution lifecycle along with other relevant attributes.

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## Perform COMPARATIVE ANALYSIS OF TICKETS along dimensions like: component, owner (analyst), reporter, type like performance, regression and security, final resolution like duplicate, invalid and fixed, and turnaround time to derive useful insights for improvement.

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## Improve PROJECT PLANNING AND ESTIMATION by complimenting it with the insights derived from event log mining of similar projects done in past.

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## INTEGRATE MULTIPLE STANDALONE SYSTEMS used during SDLC to solve data and process redundancy challenges, and obtain a holistic view.

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## Capture the ACTUAL STATUS (reality) of project or any task by discovering runtime process from event logs instead of current manual practice.

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## Continuous check on SCHEDULE ADHERENCE is a complex task. Design an automated way to track and preempt if any deviations.

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## Identify group of ACTIVE VS INACTIVE CONTRIBUTORS, GENERALIST VS SPECIALIST by analyzing performance of individuals participating in the process.

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## Mechanism to manage and keep track of SVN check-ins process that is, activity sequence for merging and branching as it is very important and can help for informed decisions.

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## Trace the complete flow and understand WHICH ISSUE LEAD TO WHICH CODE CHANGE by analyzing event logs for issue resolution in combination with the code modified in VCS.

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## Simplify tracking of the whole REVIEW PROCESS to identify inefficiencies quickly.

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## Design a technique to TRACE ADHERENCE WITH REQUIREMENTS and adapt process automatically with changing requirements.

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## Your current role at Infosys: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## Total years of work experience (irrespective of industry): \_\_\_\_\_ years

## Total years of project management experience: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ years

## Vertical for which you manage projects: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Mention any other process related problems which you encounter and not in the above list:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_