Blueprint of Success: Creating Software Product Value through Software Product Line Engineering

You are invited to participate in a study of Value Based Software Engineering and Software Product Lines. We hope to learn how software developers communicate with other software teams locally and globally. You were selected as a possible participant in this study because your position indicates that you may be part of software development practices at Oracle Corporation.

If you decide to participate, you will be presented with a questionnaire to complete about communication practices in software development at your organisation. The questionnaire will take approximately 30 minutes.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission, except as required by law. If you give us your permission by signing this document, we plan to publish the general results and provide copies to Oracle Corporation and the University of New South Wales. In any publication, information will be provided in such a way that you, your team or Oracle Corporation cannot be identified.

Your decision whether or not to participate will not prejudice your future relations with the University of New South Wales or Oracle Corporation. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without prejudice.

If you have any questions, please feel free to ask us. If you have any additional questions later, Devesh Sharma on +61 432 930 918 will be happy to answer them.

I have read the above Participant Information Statement, and agree to take part in the study.

| Please type your Full Name in the following box: | |
|--|--|
| Please type " YES " in the following box to indicate your consent to participate: | |

Please note that you can revoke your consent to participate at any point in time. All details provided above and can be downloaded from <u>here</u>.

Proceed To <u>S</u>urvey >

Instructions

The purpose of this questionnaire is to understand what processes you use to communicate within local and global software teams, and how you rate the quality of each process in terms of its *Speed*, *Richness* and *Volume*.

A list of pre-identified criteria with explanations has been included and described below. If you think this list is incomplete you can also list additional criteria in the questionnaire. You are also able to mark and pre-listed listed criteria as not relevant.

Please fill in the tables in the next 2 pages as follows:

First, if you think any communication processes are missing, please add them into the empty rows.

Then answer yes or no depending on whether you think the criterion in the row is *relevant* to consider when deciding if a specific process should be included or not.

In the columns *Speed, Richness* and *Volume*, rate the relative importance of the different processes in terms of a value between 0 and 1000. For example, if one process provides the required information at twice the speed than another, then its value should be twice as large as the other process. However, the sum of all values in the column should be 1000. You will need to complete this for both local site teams and globally distributed teams.

Eg. Criterion 1 is twice as fast in communicating information as Criterion 2

| Criterion | Speed |
|-------------|-------|
| Criterion 1 | 666 |
| Criterion 2 | 334 |
| TOTAL | 1000 |

Please Note:

- The survey will present 12 criteria with space for any additional criteria you wish to include.
- There are 2 parts of the survey, both using the same 12 criteria.
- The first part relates to LOCAL site communication and the second part relates to GLOBAL communication.
- Not all creteria may be relevant to you and can be marked as such in the "relevant" column.

Rating Criteria

1. **Speed** – this criterion represents the speed at which the process allows information to be transferred to one or more team members.

2. **Richness** – this criterion represents the quality of the information that the process allows to be transferred to one or more team members.

3. **Volume** – this criterion represents the quantity of the information that the process allows to be transferred to one or more team members.

Proceed To Survey >

Criteria Definitions

Identified Practices

The following practices have been identified as being common practices of communication between software development teams.

| Communication Practice | Description | |
|-------------------------------------|---|--|
| Software architecture documentation | Architecture documentation facilitates communication by improving comprehension through one common object of work that all participants use and understand | |
| Code walkthroughs | Common design and code walkthroughs can be used as early checks that the distributed developers have understood the requirements and instructions correctly, and are progressing in right direction. | |
| Visiting engineer | Visiting engineers work with development teams located in separate locations, and can stay and work there for a longer period of time. They facilitate communication by passing information, creating contacts, solving problems, and simply by being present for face-to-face discussions. | |
| Regular meetings | Regular meetings are a good way to distribute information between the project participants, e.g. about project progress, changes and future tasks. Meetings can be either site-specific, across the sites or a combination of them. They can be arranged, e.g. as a teleconference if physical meetings are difficult or too expensive to arrange. | |
| Change management processes | Providing the project participants an access to change management and bug tracking systems makes the communication about changes and bugs in a distributed project formal and organized. | |
| Progress reports | Progress reports collected from distributed partners and subsequently combined provide a good picture of the project situation. | |
| Discussion forums | Distributed team members can send their questions and comments to electronic discussion forums, and others following the discussion can answer or comment. Forums provide transparency to current project discussions and are useful for finding experts and getting answers to problems. | |
| Electronic chat | Electronic chat provides an inexpensive, real-time media for communication between the team members in a Distributed | |

| | project. It is especially convenient for problem solving discussions between distributed developers. |
|----------------------------|--|
| Face-to-face communication | When problems are difficult to locate and/or solve in electronic communication, or are serious ones and need urgent reaction, then face-to-face meetings of all concerned parties are often the best solution. |
| Process walkthroughs | The face-to-face process walkthrough aims to give all project participants a common picture of the collaboration process and terms used. |

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Personal and Demographic Information

| Name: | |
|---------------------------------------|-----------|
| Oracle Email: | |
| Office Phone | |
| Location: | Australia |
| Organisation unit or team | |
| Role/Position in Team: | |
| Number of years work experience: | |
| Number of years at this organisation: | |
| Application Name: | |
| Type of Application: | |
| Product Line: | |
| Target Market: | |

| Communication Process | Relevant (Y/N) | Speed | Richness | Volume |
|---|-------------------|-------|----------|--------|
| Clear Software Architecture Documentation | Yes 👻 | 0 | 0 | 0 |
| Design and Code Walkthroughs | Yes 🖵 | 0 | 0 | 0 |
| Visiting Engineer | Yes 👻 | 0 | 0 | 0 |
| Regular Meetings | Yes 🖵 | 0 | 0 | 0 |
| Clear Change Management Processes | Yes 👻 | 0 | 0 | 0 |
| Progress Reports | Yes 🔫 | 0 | 0 | 0 |
| Discussion Forums | Yes 🖵 | 0 | 0 | 0 |
| Direct Contact through Informal Chat | Yes 👻 | 0 | 0 | 0 |
| Face-to-face communication | Yes 👻 | 0 | 0 | 0 |
| Process Walkthroughs | Yes 🖵 | 0 | 0 | 0 |
| | Yes 🔫 | 0 | 0 | 0 |
| | Yes 🚽 | 0 | 0 | 0 |
| | Yes 🝷 | 0 | 0 | 0 |
| SUM | | | | |

Part 1 - Local Site Communication

Further Comments:

Part 2 >

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| Communication Process | Relevant | Speed | Richness | Volume |
|---|----------|-------|----------|--------|
| | (Y/N) | | | |
| Clear Software Architecture Documentation | Yes 👻 | 0 | 0 | 0 |
| Design and Code Walkthroughs | Yes 🖵 | 0 | 0 | 0 |
| Visiting Engineer | Yes 🖵 | 0 | 0 | 0 |
| Regular Meetings | Yes 🔻 | 0 | 0 | 0 |
| Clear Change Management Processes | Yes 👻 | 0 | 0 | 0 |
| Progress Reports | Yes 🖵 | 0 | 0 | 0 |
| Discussion Forums | Yes 🖵 | 0 | 0 | 0 |
| Direct Contact through Informal Chat | Yes 👻 | 0 | 0 | 0 |
| Face-To-Face Communication | Yes 👻 | 0 | 0 | 0 |
| Process Walkthroughs | Yes 🖵 | 0 | 0 | 0 |
| | Yes 🔫 | 0 | 0 | 0 |
| | Yes 🖵 | 0 | 0 | 0 |
| | Yes 🖵 | 0 | 0 | 0 |
| SUM | | | | |

Part 2 - Global Communication

Further Comments:

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