Note: The questionnaire is in three parts, and should take about 20 minutes to complete. You should complete Part A and either Part B or Part C. Please note that completion and return of the questionnaire implies consent. You have the right to decline to answer any particular question.

A. Background Information (all respondents)

1. What is your job title? __________________________________________

2. How long have you been with your present organisation?
   - <1 year
   - 1-3 years
   - 4-10 years
   - >10 years

3. How long have you been involved with software development?
   - <1 year
   - 1-3 years
   - 4-10 years
   - >10 years

4. How is your organisation best described?
   - Software Development
   - Telecommunications
   - Consulting
   - Banking/Finance/Insurance
   - Wholesale/Retail Trade
   - Manufacturing
   - Education
   - Public Service/Local Government
   - Health
   - Central Government
   - Research
   - Military
   - Other (please specify) __________________________________________

5. How many people are employed in your organisation?
   - <5
   - 5-20
   - 21-50
   - 51-150
   - >150

6. How many people are engaged in software development/maintenance?
   - <3
   - 3-10
   - 11-20
   - 21-50
   - >50

7. What type(s) of applications are developed in your organisation?
   (please rank: 1 most common, 2 next….., leave blank if not applicable)
   - Management information systems (e.g. decision support)
   - Transaction processing systems (e.g. payroll, POS, accounting, inventory)
   - Real time applications (e.g. process control, manufacturing)
   - E-commerce/web-based systems/web applications
   - Embedded systems (e.g. software running in consumer devices or vehicles)
   - Systems software (e.g. telecommunications software)
   - Multimedia systems
   - Other (please specify) __________________________________________
B. Complete this section if you are currently using Agile Methods, otherwise go to Section C (page 6)

Answer questions 8-22 in relation to a recent (or current) software project with which you were involved. Questions 23-27 are general questions relating to agile methods.

8. What was the title and nature of the project? ____________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________

9. What was the length of the project (from inception to an operational system)?
   Please estimate if the project is a current one.
   ☐ <3 months   ☐ 3-6 months   ☐ 7-12 months   ☐ 1-3 years   ☐ >3 years

10. How many people were involved with the project?
    ☐ <3   ☐ 3-9   ☐ 10-20   ☐ >20

11. Which agile development methods were used on the project? You may check more than one box.
    ☐ Agile RUP
    ☐ Adaptive Software Development (ASD)
    ☐ Crystal Methods
    ☐ Extreme Programming (XP)
    ☐ Dynamic Systems Development Methodology (DSDM)
    ☐ Feature Driven Development (FDD)
    ☐ Scrum
    ☐ Other (please specify) ____________________________________________
    ______________________________________________________________
    ______________________________________________________________

12. Which platform(s) were used to support the project?
    ______________________________________________________________
    ______________________________________________________________

    How well did they support agile methods?
    ______________________________________________________________
    ______________________________________________________________

    Did support for agile methods play any part in the choice of platform(s)?
    ______________________________________________________________
13. If any modelling notations were used on the project, indicate on the following scale how useful each one was:

<table>
<thead>
<tr>
<th>Modelling Notations</th>
<th>Not useful</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>entity-relationship diagrams (ERDs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>class diagrams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>use case diagrams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>use case specifications</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>activity diagrams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>state diagrams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>flowcharts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>work flow diagrams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sequence diagrams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (please specify):__________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14. For each agile practice used on the project, indicate on the following scale how useful it was:

<table>
<thead>
<tr>
<th>Agile Practice</th>
<th>Not useful</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy access to expert users</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequent builds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time boxed development cycles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Publicly displayed information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair programming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflective Improvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequent &amp; informal communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self organising team</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (please specify):__________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. On this project, to what extent did you value in practice:

<table>
<thead>
<tr>
<th>Value in Practice</th>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals and interactions over</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>processes and tools?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working software over comprehensive documentation?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer collaboration over contract negotiation?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responding to change over following a plan?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
16. List the key development activities that you carried out on the project, and the work products (artefacts) produced:

<table>
<thead>
<tr>
<th>Activity (e.g. software testing)</th>
<th>Work Product (e.g. tested code)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

17. For each tool used on the project, indicate on the scale how useful it was, and check the final box if its use was compulsory.

<table>
<thead>
<tr>
<th>Tool</th>
<th>Not useful</th>
<th>Very useful</th>
<th>Compulsory</th>
</tr>
</thead>
<tbody>
<tr>
<td>integrated CASE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>web development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>drawing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>automated functional testing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>automated unit testing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>automated regression testing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>automated build</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>automated code documentation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>automated quality assurance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>load and perform test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>bug tracking system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>refactoring browser</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>central code version management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>agile project management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>s/w configuration management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tool integration platform</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>printing whiteboard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (please specify):</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Did you supplement software tool support with sketches on paper, drawings on whiteboards, drawings hung on walls etc.? If so, how important was this, and why?

______________________________________________________________
|                                                                  |
|                                                                  |
|                                                                  |
|                                                                  |
|                                                                  |
|                                                                  |
|                                                                  |
|                                                                  |
|                                                                  |
19. How often was a new version of the software released?
______________________________________________________________
______________________________________________________________

Was an automated software release system/deployment facility used?
______________________________________________________________
______________________________________________________________

Was the success of all automated test cases mandatory to a software release?
______________________________________________________________
______________________________________________________________

20. How frequent was the software build (e.g. hourly, daily…)?
______________________________________________________________
______________________________________________________________

21. If test coverage was measured (e.g. using Clover), what was the average test coverage obtained on the project (in %)?
______________________________________________________________
______________________________________________________________

22. What parts of the code, if any, were covered by automated test cases (e.g. web based interfaces, client interfaces, business logic, container managed components, database, transaction processing…)?
______________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________

23. Have any software tools to support agile methods been tried and rejected within your organisation? Please list with brief reasons for rejection:
______________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________

24. What new software tools to support agile methods, if any, are being considered within your organisation at present?
______________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________
______________________________________________________________

5 of 8
25. What features and/or facilities would you like to see in future software tools to support agile methods, which are not provided in current tools?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

26. Approximately how many days of formal training per annum in agile development methods are provided for each developer in your organisation?

☐ <1 day  ☐ 1-3 days  ☐ 4-10 days  ☐ >10 days

Do you consider this training to be adequate? Please comment.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

27. Please add any other comments relating to agile development methods and tools (continue on reverse side if necessary):

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

C. Complete this section if you have NOT used, or have tried and rejected, Agile Methods

28. If you have not used agile methods:

(a) briefly state the reasons.

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

(b) are you currently giving consideration to using agile methods?

________________________________________________________________________
________________________________________________________________________
29. If you have tried and rejected agile methods, briefly state why.

______________________________________________________________

______________________________________________________________

______________________________________________________________

______________________________________________________________

______________________________________________________________

______________________________________________________________

30. Please add any other comments relating to agile development methods and tools (continue on reverse side if necessary):

______________________________________________________________

______________________________________________________________

______________________________________________________________

______________________________________________________________

______________________________________________________________

______________________________________________________________

Please complete the box below if you would be willing to take part in a follow-up interview:

| Name:         | __________________________________________ |
| Position:     | __________________________________________ |
| Company Address: | __________________________________________ |
| Phone number: | __________________________________________ |
| Email address: | __________________________________________ |

Please return the questionnaire in the pre-paid envelope to:

Agile Methods & Tools Survey 2005
Institute of Information Sciences & Technology
Massey University
Private Bag: 11 222
Palmerston North
Researchers:

Associate Professor Elizabeth Kemp
Associate Professor Chris Phillips

Human Ethics:

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University’s Human Ethics Committees. The researchers named above are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researchers, please contact Professor Sylvia Rumball, Assistant to the Vice-Chancellor (Ethics & Equity), telephone 06 350 5249, email humanethicspn@massey.ac.nz