



## FACTSHEET

Specialising in usability evaluation to improve business performance

**Everyone knows** how useful computer systems can be, and yet often we become frustrated when they seem to restrict us in what we are trying to achieve. By focusing on what users want to accomplish when using an application, our laboratory's method of usability evaluation analyses the real needs of the users, determines typical scenarios of use and records how successfully these have been realised. Testing can be conducted in the ATUL facility, or on site using the ATUL mobile laboratory. ATUL also provides expert assessment of the usability of an application or website with on-going support.

### WHAT IS THE ACTIVITY THEORY APPROACH TO USABILITY TESTING?

**A key property** of computer applications and business websites is that they are easy to use and meet the needs of both the business and the users. Employees are more productive when their work is supported by usable computer applications. Websites may be accessed by a wide variety of customers that may never be seen by the system developers, or even by employees of the business. In both cases, testing for usability is difficult but equally as important.

The activity theory view of usability testing takes a realistic and 'hands-on' approach, which identifies the purpose of a business's computer system or website and tests it in a situation that simulates the typical real-life activities of the users.

### WHAT ARE THE PROCEDURES FOLLOWED IN ACTIVITY-BASED USABILITY TESTING?

1. **Establish test goals:** Testers consult with the client to establish the reasons for the test and what form of outcomes the client expects to accomplish.
2. **Establish the system purpose:** The clients and/or owners are interviewed to determine the business goals that the system is designed to achieve.
3. **Information Gathering:** The information from stages 1 and 2 is used to create a questionnaire for interviewing the user after the test.
4. **Identify User Characteristics:** Who is going to use the system? The range of potential users of the system is identified. This could vary from novice users to experts in the field.
5. **Identify User Activities:** Typical user activities are identified including the presumed needs and goals in using the system. What would people want to use the system for? What information would users need to find out?
6. **Devise Test Scenario(s):** Typical scenarios of use are produced at this stage to enable the usability testing to proceed. Tests can be more or less structured as required.
7. **Select Test Subjects:** A number of suitable people are chosen as subjects to play the role of users. Subjects are reassured that it is the system, not themselves, that is being evaluated. An expert facilitator may be needed and their role to prompt subjects during the tests is explained to the subjects. *Note: A facilitator is only used if the subject concurs.*
8. **Conduct the Usability Test:** In the usability laboratory, the scenario is explained and given to the subject who then proceeds to carry out the tasks. Simultaneous recordings are made of the whole room, the computer screen, together with the user's facial expressions, eye and hands movements. Audio is also recorded. If a facilitator is present they will keep the user on the task, by asking general, encouraging questions such as 'Are there any other ways to do that?' 'Where else could you look for it?' The post-test interview, using the questionnaire from stage 3, is also recorded.
9. **Analyse the test records:** The captured recording of the usability test is reviewed by usability experts in the context of the test goals and system purpose.
10. **Write the client report:** A comprehensive report is provided to the client explaining the test results and suggestions for improvement to enhance the system and productivity.

**THE ACTIVITY THEORY USABILITY LABORATORY (ATUL) IS SET UP TO CONDUCT RESEARCH INTO HUMAN COMPUTER INTERACTION, ACTIVITY THEORY AND KNOWLEDGE MANAGEMENT, AS WELL AS FOR PRACTICAL USABILITY TESTING OF SYSTEMS USING THE METHODS DERIVED FROM OUR RESEARCH. ATUL ALSO OFFERS AN ADDITIONAL SELECTION OF INNOVATIVE SERVICES DESIGNED TO IMPROVE THE WAY PEOPLE AND ORGANISATIONS USE INFORMATION AND OBTAIN THE MOST BENEFIT FROM MODERN TECHNOLOGY.**

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