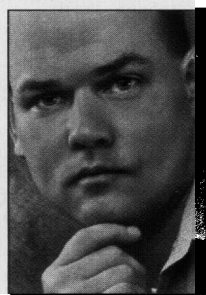# Know the user before implementing a system

The first step is to identify potential project stakeholders

By Scott W. Ambler

The Agile Modeling methodology includes a practice called Active Stakeholder Participation, which implores you to work closely with the potential customers of your system.

But what if you don't have access to your users? What if you're building an innovative new system that has no existing users? Should you give up trying to identify requirements? Absolutely not! You can always find a way to identify and prioritize requirements.

For example, Canadian telecommunications companies are in the process of developing 3G phone networks, which offer the potential for a myriad of new applications. It's unclear, however, what those applications may be. One capability of the new network is support for micropayments — transactions of less than $10. Or perhaps we'll find that micropayments, like smart cards, have few practical applications and will have little impact at all.

The infrastructure required to support micropayments will likely cost billions of dollars so it's important to have an understanding of how this investment will be recouped. To do so, the telecoms need to do some requirements modeling.

The first step is to identify potential project stakeholders — people with an interest in your project, and in particular, people who can help identify requirements. These people are found throughout the company.

Marketing people likely have some ideas they can share with you and should have a good idea of who may be potential customers. Senior managers, business architects, business analysts, and technical architects are also likely candidates. A good rule of thumb is that if you can't identify any project stakeholders interested enough to work with your team then your project is low priority and a candidate for cancellation.

Second, get your group of stakeholders together for brainstorming. An important goal is to identify who potential users for your system are. For 3G services, one category is consumers, who own a cellphone or PDA. They may not have an up-to-date one that includes the right software, but they're likely to upgrade at some point.

A CRITICAL SUCCESS FACTOR IN THE DEVELOPMENT OF ANY SYSTEM IS UNDERSTANDING THE REQUIREMENTS.

A second category of users is businesses that provide common services to consumers and to one another, including couriers and taxi drivers.

You need to brainstorm usage scenarios for each category of users to identify how they may use your system. Potential usage scenarios for consumers include searching for a certain type of restaurant nearby, purchasing food from a vending machine or a restaurant, requesting a courier pickup, and hailing a taxi. Potential business usages include obtaining payment for delivering a courier package, a taxi ride, or a meal.

Good usage scenarios are specific because individual situations vary. For example, taxi drivers may not want to carry cash due to the danger of being robbed and, therefore, may be conducive to 3G micropayments. Waiters prefer cash so they can under-report their tips earnings to the government and reduce their income taxes, while courier companies have existing payment systems in place and may not want to adopt another one. Had the usage scenario been generalized to "obtain payment for services rendered" there would be the very real danger of grossly over-estimating the potential market.

The third step is to identify potential features to support the usage scenario. To search for a nearby restaurant you would need to identify where the person is located, identify the type of restaurant they wish to eat at, search a database of restaurants, and provide a response. With a detailed feature list you are in a position to identify and estimate what needs to be built.

The next step is to prioritize the requirements. For 3G services an important factor would be the potential revenue generated by each service — how much could you charge to enable people to search for local restaurants versus how much are vending machine companies willing to pay you?

Another important factor would be popularity of the service.

Perhaps you can't make much money supporting restaurant searches, but realize this is desperately needed and is therefore your "foot in the door" to deploy your system to the masses.

A critical success factor in the development of any system is understanding the requirements for it, and to do that you need to work closely with your project stakeholders.

Scott Ambler is an independent consultant specializing in object-oriented development. www.ambysoft.com

LOOKING BACK

20 years ago
- The United States versus AT&T anti-trust case hit a snag when the presiding judge requested public comments on the proposed settlement. The settlement modified the 1956 consent decree that barred AT&T, with certain exceptions, from offering communication products/services on an unregulated basis.
- Nabu Manufacturing Corp. bought Volker-Craig Ltd. for an undisclosed amount in cash and stocks. Volker-Craig made the terminals used in Nabu's 1100 microcomputer. Volker-Craig required capital and plans to increase production capabilities to meet backlogged orders.
- The U.S. Justice Department dropped its anti-trust suit against IBM Corp. because it was "without merit and should be dismissed." IBM was charged with, in 1969, with monopolizing inter-state trade and commerce in the general purpose digital computer market.

15 years ago
- Canada led the way in installed supercomputers per capita. There were seven Canadian supercomputer installations — Department of National Defense in Ottawa; Environment Canada in Montreal; Control Data Canada Ltd. in Mississauga, Ont.; University of Calgary; University of Toronto; and Magnus Aerospace Manufacturing Corp. in Sydney, N.S.
- IBM's fourth quarter profits fell 48 cents on a 1.2 per cent decline in sales. The results represented the second consecutive year IBM had lower profits — the first time that happened since the 1930s. On the opposite end of the spectrum, Digital, IBM's chief rival in the minicomputer market, had its second quarter profits rise 98 per cent on a 22 per cent sales increase.
- Entry-level engineering workstations entered the realm of personal computing, according to Evans Research. As a result, sales were expected to increase. The Canadian engineering workstation market was worth $36 million in 1986 and was expected to reach $83 million by 1990. Shipments grew 260 per cent in 1986 to 1225 units. The leading suppliers were Sun (47 per cent), Apollo (25 per cent), Digital (12 per cent) and IBM (eight per cent).

10 years ago
- A recently released survey indicated more Canadian office workers used a PC or a terminal than any other country in the world. The report found that 88 per cent of Canadian office workers used a computer, while 64 per cent in Japan did. The U.S. had 85 per cent usage, followed by member countries of the European Economic Community at 80 per cent.
- CANARIE — the Canadian Network for the Advancement of Industry, Research and Education — was a five-year, $60 million undertaking designed to provide a high-speed communications backbone so that university, government and industry research labs across the country could work together.
- IBM Canada recorded a 96 per cent decrease in net earnings for the fiscal year 1991. It blamed "weakness in its marketing and service activities." Net earnings for 1991 were $14 million, compared to net earnings of $316 million in 1990.