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Auriga—Agile Approach in SW Development

Case Study from Auriga, Inc.

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Models: Agile Approach

Auriga is a global company that delivers a range of software development services, both through its Dedicated Development Centers (DDC) and through its Project Services, using various engineering methodologies. We are experienced with the increasingly popular family of Agile methodologies and possess expertise in the best practices and effective implementation of these methodologies. A wide range of engagement models, with Remote Engineering Center (REC) as its unbeaten champion for product companies, allows choosing the most suitable approach for the task in hand. We see the medium size of our company as our benefit, allowing us to provide the same high level of attention to all teams regardless of their size and to focus on interaction and communication that are critical to the agile approach.

Over the past several years Auriga has been doing projects that require evolutionary change throughout the entire life-cycle of the project with increasing frequency. The majority of our teams working for our customers—software and hardware high-tech companies—commonly use agile methods when developing new products, as requirements are developed, detailed, and changed as the project goes forward.

The development methodologies used by Auriga with different clients are not always formally called Extreme Programming, Scrum, or bear some other well-known formal name, but in fact employ all essential agile practices from classical methodologies. Part of the reason is that we always tailor the processes to match the specifics of the customer's operation. Another part is that pure classical agile models need to be revised to a certain extent to be successfully applied to a "distributed agile" case, when in addition to the project team and the customer representative that cares about requirements, priorities, and acceptance, we have the internal engineering team on the customer's side that needs to be included in the equation.

Typically, the following practices are used:

- Short iterations with fixed scope
- Continuous involvement of the customer
- Direct communications at all levels
- Frequent light-weight reviews
- Test-driven development
- Peer reviews and peer work, collective code ownership
- Getting commitment from engineers through involvement in effort estimation
- History-based planning & estimations
- Strict up-to-date KISS principle in design, refactoring

Selected Auriga engineers have undergone training in agile methodologies. Therefore, Auriga can follow Agile agile methodologies both strictly as defined and informally, using the general agile principles.

Scrum at Auriga

Auriga can successfully follow the formal Agile methods in its projects, for example Scrum. In particular, the Auriga team can comply with all Scrum characteristics:

ScrumMaster—a person, whose primary job is to remove impediments to the ability of the team to deliver the sprint goal. In our case it is one of the basic and well-known Agile methodologies. We take it as an example to demonstrate how Auriga can successfully follow Agile principles in the projects. Selected Auriga specialists are trained as ScrumMasters to ensure that the methodology is applied correctly to the tasks performed by our engineers.

Working on a Scrum project having a distributed team with the engineering force provided by Auriga located at an offshore location separately from the customer's product specialists has its specifics. In such cases we use the following approach:

- Project Roles. One of the customer representatives is assigned to the product owner role defining the scope and requirements, assigning requirements priorities, and approving all results. That person is augmented with a selected representative of the Auriga offshore team – often called the deputy product owner - that contributes to the owner's work by assisting with preliminary estimation of the work pieces and indicating deficiencies in the product backlog definitions.
- A product backlog of prioritized work to be done The deputy product owner also plays the role of the ScrumMaster.
- Sprint Artifacts. In accordance with the methodology, a sprint backlog is defined and the corresponding burndown chart (which coincides with the sprint backlog at that moment) is put under configuration control. Online access to it is provided both to the client and to the offshore team. Different tools starting from simple MS Excel, or defect management repositories, or specialized tools of customer choice are used to maintain the chart in the up-to-date state and provide shared access to it. The burndown chart is updated by the offshore team daily.
- Daily Scrum Meetings. Typically, most of the daily meetings are performed inside the offshore team in the form of the face-to-face meeting with the customer representative not participating in them. The deputy product owner plays the product owner's role during such meetings. The customer representative typically participates in daily scrums once a week by phone. The product owner may change this approach and request participation in any scrum meeting, although face-to-face conversations in the native language are more productive, thus product owner's participation is typically limited to weekly calls. In addition to keeping the burndown chart up-to-date on the daily basis, the team also provides weekly summary reports to the product owner.

- Sprint Planning and Review. The sprint planning session is performed only after the product owner and the representative of the offshore team have discussed the existing product backlog and eliminated all issues that could impact the efficiency of the planning session. During the planning session the team selects the backlog items for the sprint based on the priorities and effort estimates. This selection is approved by the product owner who actively participates in the session. It is recommended to perform the planning session in the form of the face-to-face meeting (typically, the client visiting the offshore team to minimize the travel expenses), especially for the first session in the project. A brief sprint retrospective, at which all team members reflect about the past sprint - the sprint review, is held as usual. Typically, it is followed by the planning session for the next sprint combined in the same visit

Project Samples

Agile methodology is highly recommended for the projects with incomplete or rapidly changing requirements—such as the development of Web 2.0 products, for example.

Development of the Web-based social search engine and integrated lifestyle information aggregator product

Auriga has assisted its customer in the management and development of an application-agnostic social computing platform that offers users a way to create and customize a single, secure, universally accessible launch pad and landing zone for conducting and managing every facet of their online world, including personalized search, email, blogs, voice-over IP, photo sharing, document storage, podcasting, videocasting, IM, SMS, chat, and personal profile management. EJB3, PostgreSQL, JBoss, JSP, LDAP technologies have been used throughout the development process.

The development of a Web-based music and multi-media-content community

The Auriga engineering team is working on the development of a Web-based music and multi-media-content community that consolidates music and video, and enables users to rate and share their favorite music and videos across the Internet. The project is developed on the basis of the Ruby on Rails open source web application framework using Flex-based interface. The, following technologies were also used in the course of the project: PostgreSQL, On2 Flix Engine, Prototype + script.aculo.us.

> "The Auriga team has been instrumental in NeXplore's Web 2.0 product development efforts. Speed-to-market and superior quality are vital to the successful launch of Web 2.0 products in today's increasingly cluttered, highly competitive market. Auriga's world-class engineers and developers have helped to ensure that we deliver cutting-edge products on time and on budget."
>
> NeXplore