Software Development Services Engagement Model

This process outlined below embodies best practices form Calcey's Agile software development experiences, and facilitates an unambiguous relationship between the client and the service provider (Calcey).

Macro Lifecycle

1. Ballpark Estimate (Free of Charge)

Inputs: High-level requirements as user stories

Outputs: Ballpark estimate of person-day effort, cost and schedule for Requirements Elaboration (if required) and Implementation

2. Requirements Elaboration

Inputs: Requirements discussions, Prototyping sessions, and Design discussions

Outputs: User Experience Prototype (Hi-Fi Mockup), Architecture Document, updated Estimate and Sprint Release Schedule

3. Implementation

If the scope is broad enough to permit it, this is a Cyclic Process, where the elaborated requirements will be released incrementally every 3 Weeks, as Work-In-Progress (WIP)[1]. The steps in each 3-Week cycle are:

- Sprint Planning
- Sprint Development
- Sprint Testing
- Sprint Demo / Client Feedback
- Change Request (CR) Processing[2], and Sprint Schedule Update
- Retrospective

1. Note that WIP software may include defects/imperfections

2. The schedule and cost impact of any new functionality raised at the Sprint Demo will be quantified, and raised as CRs for approval by the client

This process will continue iteratively until the production software is released, in keeping with the Sprint Schedule.

Payments for Services

Stages 2 and 3 in the macro life-cycle will require 50% advance payment for commencement. The client, on the acceptance of the delivered output, must settle the 50% balance payment. As an example, if the requirements elaboration was estimated at USD 3,000.00, then an advance payment of USD 1,500 must be made for the commencement of this exercise. The balance USD 1,500 can be settled on receipt of the output deliverables.

Similarly, if the implementation is estimated at USD 50,000.00, then an advance payment of USD 25,000.00 must be made for the commencement of the software

development. The balance USD 25,000.00 can be settled on acceptance of the software for deployment in the production environment.

All change requests raised midstream during the implementation process that have a cost impact will be added to balance payment amount.

Methodology

Calcey's methodology is a variant of Scrum. The fundamental unit of team commitment would be the Sprint – a time-boxed duration during which the team attempts to achieve a set of pre-defined goals.

Zooming out into the broader program status, managing the Sprints top-down to ensure reasonable achievement of the top-level rollout objectives is an important part of the Project Management scope. However this would be a collaborative task between the Calcey Scrum Master and the Product Owner, and would be a *shared responsibility*. The principles to be adhered to are described here: http://agilemanifesto.org/

Figure 1below describes the different activities that are part and parcel of a regular development Sprint.
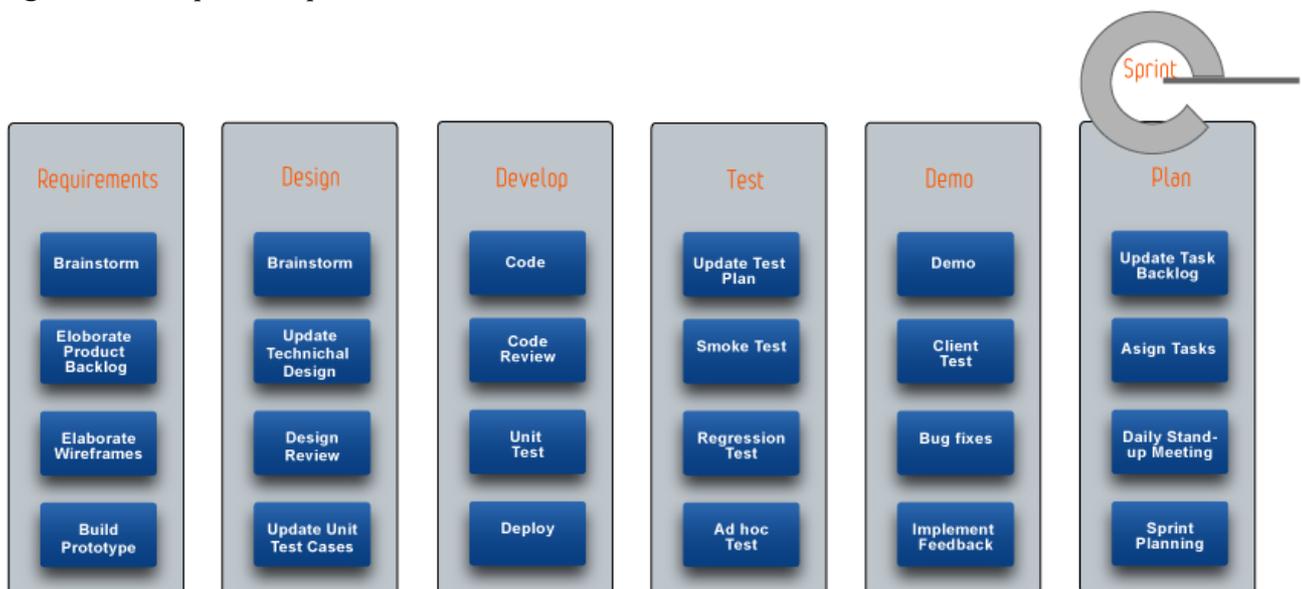

Figure 1

Listed below are some good engineering practices that we follow at Calcey:

- Keeping every process or step as lightweight and simple as possible
- Time-boxing
- Brainstorming
- White boarding & Prototyping
- Pair programming
- Focus on GUI and Features as opposed to (say) dealing with business concepts
- Maintaining a Feature & Task Backlog
- Incrementally Working Software
- User Testing/Demos of Work In Progress
- Unit-Test Driven Development (whenever it makes sense)

- Continuous Integration and the use of other development life-cycle aids as deemed necessary
- Evaluating the Sprint Velocity in terms of the broader Release Goals, and adjusting the team size
- Allowing requirements rollovers and improving estimation with each Sprint (reach 80/20 rule)

Calcey has proven experience in Scrum-based software development, and actively engages in educating its clients about the effectiveness of agile software development.