Custom Gateway Solutions – No surprises!

Excelocity specializes in the development of Custom Embedded Gateway solutions for Telecommunications and Enterprise product vendors. We have developed a number of custom products and as a result have the knowledge and expertise to do it right the first time for you!

Excelocity takes a comprehensive approach to engaging customers, understanding the project and product needs. We then provide an advanced and transparent design and development process that leads to a product verification and then support stage and ends with an efficient transfer of technology to the customer's team.

We Deliver on the Key Success Factors

As a virtual part of your team, dedicated to your new product success, we know from our own experience that any new successful product development is largely dependant on the following key delivery success factors:
1. No major surprises.
2. Meeting the schedule.
3. Meeting the budget/cost targets.

Our business model and processes allow us to almost guarantee we will meet those success factors every time! It is based on a fixed price quote with schedule and quality guarantees which means we share the risk with our customers in the delivery of the new product. As a result we have a set of processes that we rely on the make sure we meet those commitments.

The following describes the generic process we follow with each customer. Depending on what stage you are at in your product development cycle we customize the process and set of services required to meet your specific needs and situation.

Initial Engagement

Our initial engagement process is focused on understanding your situation, product needs and project requirements in terms of timing and scope. We also discuss the use of tools to develop the solution. We can use your tools and systems to ease the technology transfer and maximize the transparency or we can use our own extensive set and provide code updates to the customer as we evolve the solution.

Depending on the scope and complexity of the project Excelocity can generally turn around a first pass estimate and draft project plan within one to two weeks.

Requirements Process

We all know that good requirements are at the heart of a good product. In many cases the requirements need to reflect field experience and prior knowledge of what works and what doesn't. As well, usually some very specific domain knowledge (i.e. Voice and VoIP engineering) understanding critical to a good design.

If you have your product requirements well defined we will work with that and turn it into a Solutions Requirement Document that incorporates all the specific knowledge and insights we bring to the solution. That document is thoroughly reviewed before starting the development. If you do not have the Product Requirements well defined or are not sure of them, we can work with you to develop and write the product and solution requirements documents.

We can also recommend specific best in class software components and some DSPs to use. To support this, we also have some pre-designed and integrated code that uses these best in class components that can be used to speed up the development process.

Development Process

The Excelocity Design and Development process has been developed and refined to meet the specific type of Gateway product development we do with an experienced team**.**

We use an Agile development approach that allows pre-release versions of the product to be available for evaluation and incorporate changes in requirements as the product takes shape. The process is also based on building increments that may be designed and implemented in weeks. Development starts when a core piece of functionality has been defined and the evaluation and integration occurs as increments become available.

With each major iteration, the product functionality incrementally evolves to the final solution in a planned order. Because we have a proven, experienced team we are able to fast track many aspects of the design and development.

To enable a process that includes the development and delivery of several iterations the implementation architecture is based on a structured framework that can evolve to incorporate new requirements and is easily extended through the use of pluggable commercial off the shelf software and custom components. We use pre-integrated and tested 3rd party software components and stacks along with our own pre-designed and tested gateway software components. Our XL-Gateway Framework is used to integrate and customize all these components and their options.

The attributes of this overall development approach are:
1. **An active and ongoing customer involvement**.
   This is an interactive and iterative process of communication and adjustments.

2. **The development team is empowered to make decisions.**
   Our developers are empowered to make decisions and have the experience to make the right choice. This keeps development moving. Also within the tenants of Agile Development – a wrong decision will be found and corrected quickly.

3. **The requirements may evolve but the timescale is fixed**
   As part of an open process, the level of progress is always known. Priorities can be communicated and re-prioritize and re-schedule the delivery of iterations and content.

4. **Requirements are captured at a high level using lightweight & visual techniques.**
   Requirements are gathered at a high-level and refined as mid-level design documents. Following the adage "a picture is worth a thousand words" flow-charts or other visual representations are used to describe the design.

5. **Development is done in small, incremental releases and in iterations.**
   How do you eat an elephant? One bite at a time! In the same way, the development project regardless of size is broken down into smaller pieces.

   As experts *in the specific VoIP development areas*, we are able to quickly disassemble the product requirements for an entire product and provide an organized and comprehensive list of deliverables that will result in a completed product.

6. **The focus is on frequent delivery of products (or parts of products).**
   The primary goal of the development process is to produce the correct product quickly. When a component or feature has been implemented and is ready to use, verification and customer evaluations may begin.

7. **Each feature is completed before moving on to the next.**
   To declare a feature as "done" it must be implemented, tested and accepted by the customer. This ensures that the component is correct before the developer moves to the next development activity. Also allows the customer the ability to track the progress of the project.

8. **Testing is integrated throughout the project lifecycle – test early and often.**
   Verification is involved from the outset through planning the quality testing during development. The test and tools requirements are captured along with the product requirements to ensure a smooth transition from implementation to verification and delivery.

   Since the development is released as completed increments, the customer is able to start working with early stages of the product and can assess the quality and direction of the product.

9. **A collaborative & cooperative approach between all stakeholders is essential.**
   Frequent, formal and casual communication amongst the members of the Development team is used to manage dependences for inter-working, scheduling and quality.

   This is also true for the communications between the customer and the development team in order to convey requirements, discuss interpretations and to close the loop in real-time on the direction and the details of the product.

Product Verification Process

The Excelocity first phase of the product testing and verification process is done in our labs with our own test gear and systems.

We do full unit and software system testing, traffic load testing, real time call processing testing and if possible the preliminary interface testing with the other parts of the customers system.

When development is complete we can assist with the final system integration and testing on the target hardware and with other system software.

Defect Management Process

Formal issue tracking starts at the beginning of the product development. This allows early and concise tracking of quality throughout the development of a product and provides a knowledge asset used to improve future development.

Technology Transfer Process

The process of transferring the technology and solution to your organization is a critical final step. This is done after the product verification stage and during the period we provide support. It is aided by the fact that the design and development are in constant communication with the customer during implementation. The numerous interactions usually have helped develop a thorough understanding of the product design along with the well documented code.

The process involves:
- The official transfer of the final version of the code and documentation.
- Training of a fixed number of your design and/or support staff.
- Providing 2nd level support for a defined period while your staff provides the 1st level of support and working with them to get up to speed.
- After a period of time we either have a contracted support agreement or your organization assumes full support.

That is the summary of the Excelocity approach to building a custom gateway solution for your Carrier or Enterprise Product Company.

By taking this approach we achieve the following benefits:

1. **A lower risk product development approach** as our business model shares the risk with you.
2. **A much faster development cycle** due to our unique development approach.
3. **Better quality in the design and code** because we build quality into the design.
4. **Quick response to design changes** as we progress the thorough the development.
5. **Flexible solutions** based on an architected design that is extensible as well as hardware and OS independent.
6. **A close two way relationship** with you the customer.
7. **Transparency** during the entire development and delivery process.

This all contributes to the "No surprises" part of our promise and the commitment to the Schedule and Budget!

Please contact us to discuss your gateway design and development project.