

Japan

# Software Development Excellence with JBCC Agile

Whitepaper



Have you ever wondered why Japan is an example of high productivity and technological excellence? Whether due to its mastery of robotics and hardware, or its great capacity for innovation together with its Kaizen philosophy of continuous improvement, Japan is always at the forefront. However, this is not always the case when it comes to software development.

This article explains why a Japanese company that provides technology solutions has chosen a different methodology for its market –**the agile development methodology**– instead of the cascading methodology that prevails in Japan. Also, how **this paradigm shift that is necessary to advance software development was made possible with an automatic low-code development platform such as GeneXus.**

JBCC (Japan Broadband Communications Corporation) is one of our main partners in Japan since 2013. It has achieved a remarkable track record over these years, and here is an account of its work with agile methodologies together with GeneXus.

The Japanese company is mainly engaged in hardware-related businesses and, as a result, in software services as well. In this context, it provides solutions to companies using GeneXus.

It has clients in different sectors, most of them in the manufacturing industry, but also in services and education. Throughout this time it has obtained excellent results in more than 200 projects developed with GeneXus.

**Automation** is the first feature highlighted by JBCC's technicians. In evaluating the results obtained, they concluded that on average their productivity was increased by 70% compared to manual Java coding.

**Productivity and integration** are other benefits obtained. Also, to be able to quickly deliver quality solutions adapted to the user's needs with a **40% reduction in development time and with an agile methodology** (compared to the waterfall methodology). "Delivering an easy-to-use system is the most important for the customer, and achieving the customer's trust is very important for JBCC. GeneXus is a high quality product to be able to deliver high quality system and that is the way to build that trust," stated Mr. Takahiro Nakano from the company JBCC, and added: "Using GeneXus to develop a system enables us to achieve high-quality system integration, which further deepens the trust between us and our customers."

**Agile development**, in addition, has enabled this software house to succeed. GeneXus is the backbone of JBCC's method called **JBCC Agile**, states Mr. Kawakami, Director of Systems Integration.

---

«Using GeneXus to develop a system enables us to achieve high quality system integration, which further deepens the trust between us and our customers.»

Mr. Takahiro Nakano. JBCC.

## Formula for successful software development in Japan: **JBCC Agile + GeneXus**

Japan is recognized worldwide for its outstanding technology and highly perfectionist style. Perfection is an ideal that can be rigorously achieved, but in the software field it also requires some flexibility. That's why JBCC looked for other development methodologies and now thrives with GeneXus and the JB Agile methodology.

Agile methodology is a concept used in software development to describe incremental and iterative development methodologies that allow the team to quickly adapt to changing needs.

**JBCC Agile is the adaptation of this methodology to the Japanese market,** implemented in 5 iteration phases:

1. Situation analysis,
2. Requirements,
3. Prototyping,

4. Product, and
5. Finally, the iterative development phase for the product.

Since changes can be generated automatically in the prototyping phase or in part of the database, JBCC's technicians highlight the capacity to advance between these different phases –even with bugs– quickly and smoothly.

In addition, when a finished product is delivered to the customer, it is easy to maintain. And this aspect is very important, according to JBCC, because customers value being able to continue to easily maintain the systems by themselves.

Why did software development flexibility give the company unprecedented power to move forward with each project? JBCC technicians summarize it in 2 advantages provided by GeneXus.

### **Two advantages of using GeneXus, according to JBCC:**

1. "Automatic generation frees us from manual coding and speeds up progress."
2. "Database refactoring is automatically performed by GeneXus based on changes in the data model."

Now that GeneXus' strengths have been linked to software innovation in Japan, it is time to go deeper into the details of the agile methodology adapted to this impressive Japanese company.

## Overview of JBCC's Agile Development:

**-Situation Analysis and definition of requirements:** this is the first step. In general, consultants working on the Situation Analysis focus on "TO BE" (what they want to achieve). However, for JBCC Agile, the System Architecture doesn't work with this alone. JBCC's agile methodology, besides controlling the "TO BE" aspect, takes into account the "AS IS" aspect (considering the Current Situation). In addition, thanks to the function integration method, an attainable "Scope Setting" can be established, allowing the system to be successfully rebuilt.

-In the **Requirements Definition** phase, new tasks are quickly mapped at first and then checked later. Also, a summary of the client's requirements is made.

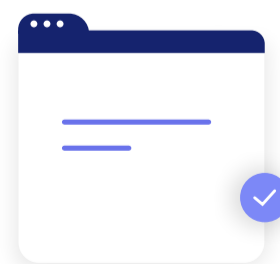
-When the basic **Test Case** is performed with the client, data update patterns can be identified, and GeneXus is introduced to view the normalization of forms on screen. In the end, this allows for faster database building. JBCC calls it "Core Model Development."

**- Iterative development from the prototype phase.** GeneXus is used in this development phase because it enables agile development. Also, in this phase JBCC advises its clients to learn how to use GeneXus because it allows them to perform maintenance themselves once the project is delivered.

**- Iteration is performed only 5 times** to complete the product –no more, no less.

**- Customer training.** Clients are advised to use GeneXus so that they are able to maintain the systems themselves. The training program lasts 3 months, but in general after 2 months clients already have working knowledge of the software. At the beginning of the project, they can do development tasks with JBCC as any other staff member, and at the end of the phase they can perform maintenance tasks on their own.

**- Finally,** the client is shown the old and the new programs, comparing how the two work in parallel. This is verified through 5 iterations until the project is completed. In this way, the basic Test Cases are updated until the end of the requirements verification. Then, in the Product phase – or the final version of the Test Case– the Pilot Phase is reached in which the final product is delivered. For screen display, of the 5 iterations, JBCC manages the 1st and 3rd iteration; the 2nd and 4th iterations are managed by the client.



## JBCC Agile Methodology in Yoyogi Seminar:

[Yoyogi Seminar](#) is one of the large clients to whom JBCC provides solutions.

“With JBCC Agile, our project could be completed in a year and a half. The other big company we approached for a quote estimated that it would take us 4 years. In the end, we achieved savings of one fifth of the operational costs.”

**Technical details:** In one and a half years, 697 functions and 2115 programs were created.

The main tasks consisted of building systems with batch processing and spreadsheets.

“Due to the project’s size, we divided into 3 large teams. By focusing on the production work, within 5 months we had developed about 2100 programs. In terms of productivity, on average we would make about 14 programs per month, with each technician producing 3 to 4 programs per week.”

Yoyogi’s staff also highlight their confidence on the system, due to its ease of integration and normalization of the database: “It makes us very confident about the changes in examination systems that we have to face in 2020.”

“With JBCC Agile, our project could be completed in a year and a half. The other big company we approached for a quote estimated that it would take us 4 years. In the end, we achieved savings of one fifth of the operational costs.”

Find out how GeneXus  
can do the same for your company.

[info@genexus.com](mailto:info@genexus.com)

