CodeTurn for COBOL to C# Migrations

About Anubex CodeTurn COBOL to C# Conversions

Many of today's applications that were developed in COBOL are still mission-critical and continue to deliver significant benefits to the organizations that use and rely upon them. Nevertheless, many organizations are faced with issues of Total Cost of Ownership (TCO), skill shortage, or end of support. Anubex' service provides an opportunity to liberate these valuable and reliable business systems from their dependency on legacy technology, and converts them to Object-Oriented languages such as Java or C#.

Service highlights

Anubex will take any application developed in COBOL and automatically convert it to a functionally identical one, now ready to run on Windows and .NET.

Since both the conversion and the testing is fully automated, the outcome of the project is fully predictable, in terms of risks, costs, and duration!

Three strong promises

All Anubex conversions ensure three types of equivalence:

❖ **Functional equivalence**: the converted application's behavior is identical to that of the original one;

❖ **Performance equivalence**: the converted application will perform at least as well as the original one (assuming adequate infrastructure); and

❖ **Maintenance equivalence**: maintenance of the converted application will be - after proper training provided by Anubex - comparable in effort to the original application.

Why convert your COBOL to C#?

There are many good reasons to make the move from COBOL to C#. These are typically the major concerns for businesses:

❖ High (and rising) maintenance and runtime fees for the existing COBOL products;
❖ Shrinking availability of COBOL developers and lack of interest in COBOL from young developers;
❖ The End-of-life scenarios for certain COBOL technologies;
❖ Lack of application extensibility and interoperability with other, non-COBOL applications.

C# and the .NET platform offer answers to all these concerns:

❖ Support fees are negligible or even non-existing;
❖ C# is one of the most widely-used programming languages today and actively being developed;
❖ The .NET platform is constantly extending as well becoming available on more operating systems and devices.
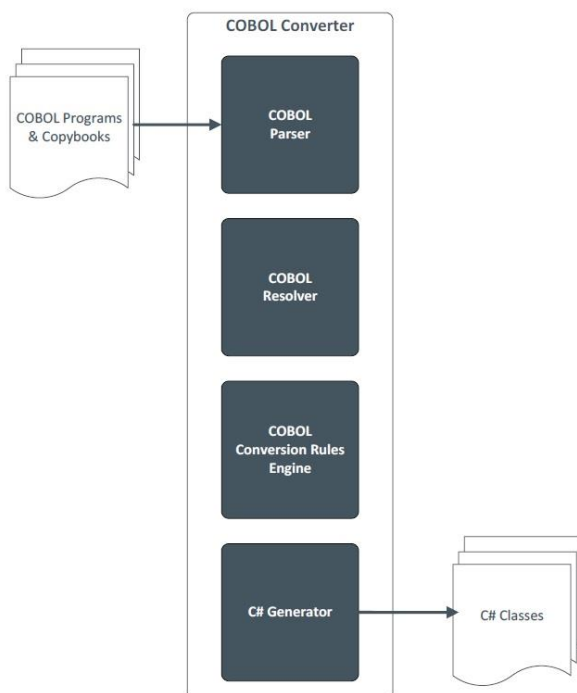
Next to that, moving to C# also means:

❖ Enabling the use of a state-of-the-art IDE, with extensive debugging, refactoring, profiling and (unit)testing support.
❖ Enabling the use of thousands of third-party libraries, covering almost all imaginable computing needs.

COBOL to C# conversion

Anubex uses its own specialized tools to automate the conversion of COBOL sources to C#, guaranteeing code quality, avoiding risks, and offering full predictability through 100% automation.

The architecture of the COBOL to C# converter contains:

❖ A parser that support many COBOL dialect syntax, and embedded languages (e.g. EXEC CICS or EXEC SQL);

❖ A resolver that computes detailed control-flow and data-usage information;

❖ Conversion rules for all COBOL syntax, from single statements to complex patterns of code; and

❖ A code generator for C# enabling any desired coding style.

Key traits of Anubex' conversion tool

❖ Handles all COBOL data types with 100% fidelity;
❖ Handles also complex GO TO and PERFORM/fallthrough based control-flow;
❖ Handles POINTER, BASED and ADDRESS OF;
❖ Favors simple mappings when possible while having fallback mappings when needed (E.g. PERFORM will be a method invocation if possible but also RM/COBOL style PERFORMS can be mapped);
❖ Has clean mappings for most COPY and many
❖ COPY…REPLACING directives;
❖ Resulting code takes maximal advantage of modern IDEs refactoring possibilities so further changes can be done in an incremental and type-safe way;
❖ Resulting code can be configured to be more OO-style or more procedural style;
❖ Offers many out-of-the-box customization possibilities (e.g. removing dead code, removing unused variables, naming and grouping of data, ...);
❖ A plugin-based architecture making it easy to create project-specific conversion rules;
❖ Enables modernization of UI (e.g. using web-based or WP UI) and data storage (using any RDBMS instead of ISAM/VSAM);
❖ Built to take advantage of massive parallelization resulting in even the biggest source code sets (with tens of millions of LOC) being converted in a matter of hours;

COBOL Converter

COBOL Programs & Copybooks → COBOL Parser → COBOL Resolver → COBOL Conversion Rules Engine → C# Generator → C# Classes

References

Anubex has a 100% success rate, having completed numerous conversion and modernization projects around the globe.

Each of these projects has been delivered on time, within budget and to the complete satisfaction of the customer.

More information

More information can be found on **www.anubex.com** or you can contact us at **migrations@anubex.com** with your questions