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LeBLANC software factory for ISVs

LeBLANC software factory refers to a **method** and supporting automation **tools** that improve application development process throughput. Measured results have shown roughly **doubled throughput** in real life projects, which in turn enhances cost efficiency and project completion times. Industrial automation also improves **quality**—the automatically generated code is entirely error-free, and only human-produced outputs require testing.

The method is based on:

- A production line approach to development, and continuous, lean mindset improvement of the software development process, for example by removing unnecessary steps.
- Model-driven development and the use of an application generator benefits.
- Entire production line end-to-end automation.
- Artificial intelligence utilization in suitable process steps.
- Harnessing and involving citizen developers (such as Product Owners and other business experts from the client organization) in the system construction process.

LeBLANC software factory is available to anyone via SaaS subscription on Azure Marketplace: https://leblanc.fi/azuremarketplace

Method in short

Method main phases are 1) **modeling** and generating the application automatically from these models, followed by 2) **customization** phase, in which the specific features required for the system are implemented either by traditional manual work or AI-assisted programming.

1. Modelling and automatic system generation

- Model – Generate – Test – Repeat until satisfied with the result.
- Citizen developers participate in iterating the models and testing the results.
- Record any necessary customization points for the automatically generated application in this phase (e.g., role-specific homepages “dashboards” and other possible custom pages, required integrations).
- The outcome is a completely error-free, automatically generated application that can be run and tested in the LeBLANC development environment, known as the “farm”.
- The system is roughly 80% implemented after this phase.

2. Manual (or AI assisted) work and customizations

- Implement the required custom pages for the application
- Implement any necessary integrations (you can utilize the generated API interface and the database)
- Develop process backend functionalities (if needed)

- Finalize the user interface with your own CSS styles.

Resulting production application

The application is built on standard Microsoft technologies and .NET development, utilizing Entra ID for user authentication and API interface security.

The resulting Microsoft Visual Studio project consists of the following components:

- Frontend – project, including the source codes of the application (C#, Blazor WASM)
- Backend / API – application project, source codes (C#, API Controllers)
- Shared – a project containing shared objects used by both the frontend and backend
- Necessary Azure WebApp configuration files with default settings
- SQL database – scripts for creating and initializing the database in their own directory

The outcome of the generation is a cloud-native Azure application.

Modifying and customizing the generated application

The LeBLANC method does not prevent modifying the generated code—in fact, we encourage customization. Certain features are simply easier to code directly than to attempt to solve them with any models. The method includes a built-in way for custom code to be integrated into the generated whole. We provide instruction on the conventions for how and where it’s best to modify the generated application, so that regenerating the application remains possible throughout its lifecycle.

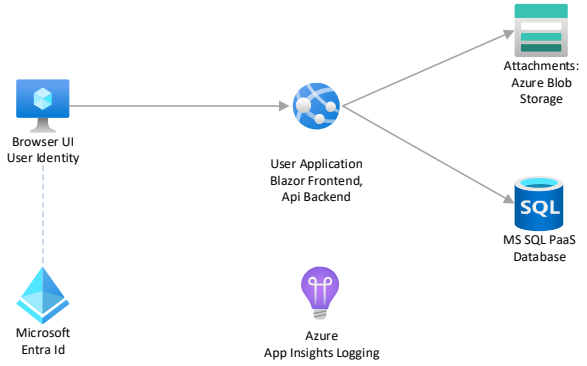
Development, test and production environments

Kehitys- ja testivaiheessa sovellusta ajetaan yleensä LeBLANCin tarjoamassa ajoympäristössä, eli ”farmissa”, jotka mahdollistavat nopean iteroinnin. Malliin perustuva sovellus (kustomointeineen) voidaan missä tahansa kehitysvaiheessa siirtää farmiin ajettavaksi ja testattavaksi. Tuotantosovellus asennetaan asiakkaan omaan Azure-ympäristöön.

During development and testing, the application is typically run in the LeBLANC hosted Azure environment, referred to as the "farm," which enables rapid iterations. At any point in the development process, the model-based application (including potential customizations) can be deployed to the farm for testing. The production application is installed in the customer's own Azure environment.

Azure architecture

The result of the generation is a cloud-native Azure application, with its architecture illustrated in the diagram. The customer can extend the application's architecture as needed, taking advantage of all that Azure offers; networking, security components, load balancers, analytics and Azure AI services. We also assist with the architectural planning.



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LeBLANC benefits for ISVs

LeBLANC software factory offers comprehensive business and consulting opportunities for ISVs:

- Professional modeling work – very similar to any other model-driven development tools, such as MS Dynamics & Dataverse, Salesforce, SAP or Oracle ERP
- Implementation of custom pages and functions in user interfaces. Tailoring the appearance of user interfaces to match the customer's brand.
- Integration implementations
- Utilizing analytics and AI in the system
- Production environment architectural planning, environment implementation, and maintenance
- Application maintenance and further development
- A competitive advantage gained through increased productivity in the application development process.

LeBLANC Customer Success services – you are not alone

We are with you throughout the entire project, guiding and advising you on best practices. Our customer success services is especially focused at the beginning of the project, where we aim to teach you the most effective working methods and help you avoid pitfalls and maximizing productivity benefits. The goal of our support service is to make ourselves unnecessary – typically, it takes about 2-6 months until the method and related practices are in the hands of the project team and fully understood.

More information...

Frequently asked questions, and dig deeper with the following sources!

LeBLANC home	https://leblanc.fi
FAQ	https://leblanc.fi/faq.html
Roles and skills required	https://leblanc.fi/roles-and-skills.html
Method blog	https://leblanc.fi/blog.html
Model driven development	https://leblanc.fi/model-driven-development.html
LeBLANC on LinkedIn	https://www.linkedin.com/company/leblanc-finland-oy/

You can contact us directly, we'll be glad to help. Thank you for considering LeBLANC!

LeBLANC Finland Oy

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