

Software refactoring for mammography machines

Category: Case Study

written by Nicola Bavarone | July 4, 2026



Case Study

A medical device manufacturer specialized in mammography and tomosynthesis systems needed to move away from a legacy VB6 software environment. The goal was not just to update the code, but to rebuild the software stack around a more maintainable and future-ready platform.

Project Summary

Industry	Medical imaging
Scope	Porting from VB6 to LabVIEW, full UI redesign, logic refactoring
Integration	Communication with customer-designed driver boards
Main Goal	Preserve continuity while making the platform easier to evolve and maintain

Background

The original software had been developed in Visual Basic 6 and had served its purpose for years. But over time, the limitations of the platform started to show. The interfaces felt dated, the code was harder to extend, and every change required too much effort.

The customer needed a cleaner solution that could still talk to the existing hardware architecture. So the real challenge was not to start over from scratch, but to move the whole system forward without breaking what was already working.

The Challenge

- Port the software from VB6 to LabVIEW without losing operational continuity.
- Rebuild all interfaces to make the system more usable and easier to

navigate.

- Refactor the application logic so it could be maintained more easily in the future.
- Keep communication with the driver boards designed by the customer's engineers.
- Create a stronger base for future updates and functional growth.

The Solution

The software was fully rewritten in LabVIEW, with all legacy VB6 interfaces redesigned from the ground up. The application logic was also restructured to make the platform more modular and easier to support over time.

At the same time, the communication layer with the customer-designed driver boards was preserved and adapted so the new software could continue to work within the existing machine ecosystem.

Software platform LabVIEW

Legacy system	Visual Basic 6
UI work	Complete redesign of all interfaces
Hardware link	Existing customer driver boards

Benefits

- A more modern and intuitive user experience.
- Cleaner code that is easier to read and maintain.
- Less dependence on legacy VB6 expertise.
- A more scalable platform for future development.
- Better long-term continuity for the installed machine base.

Future Outlook

The new platform gives the customer a more solid starting point for future releases. Routine maintenance can now be handled more easily, while more advanced evolution can continue on a stable technical base.

In practical terms, the project turned a legacy constraint into a platform that can keep growing.

Want to know more?

If you are working with legacy software that still needs to interact with complex hardware, this kind of migration can be a good path forward.