

Modernization of desktop apps

Leveraging Web-based UI for your Java solution

WHY MODERNIZE

While your app has the loyalty of customers and a history of successful operation, it might still benefit from some visual and functional touch-ups.

This is where the hybrid approach comes in handy. It provides your users with good-looking and convenient web-based interfaces while retaining the stability and trust earned by your app.

Renewing the applications, using web technologies brings several advantages:



Enhanced accessibility. Web technologies enable applications to run across multiple devices and operating systems without requiring installation.



Improved user experience. Responsive designs, intuitive interfaces, and real-time updates.



Reduced transition shock. Long-term customers wouldn't need to adapt to an entirely new app.



Scalability. Easier integration with modern cloud services and third-party APIs for future growth.



Stronger security. Centralized updates and control enhance security measures and compliance.



Cost-effectiveness. Lower maintenance costs and technical debt associated with technologies growing older.

HOW WE CAN HELP

With 30+ years of hands-on experience helping our clients, we are really good at



Hybrid applications

creating and embedding web-based UI as an integral part of desktop Swing, SWT, and JavaFX apps.



UI/UX design

creating modern intuitive and attractive interfaces for your app.



Web technologies

building dynamic and responsive UI, based on React, Angular, Vue, etc.



Project management and execution

assessment, planning, and delivering transitions of desktop applications to the web.



Support and maintenance upon delivery

dedicated engineers providing prompt technical assistance when needed.

CHANGE GRADUALLY. SEE RESULTS CONTINUOUSLY

Your application has weight and history. No need to change it in one sitting.

Working with worldwide telecom, banking, and bioscience behemoth projects, we know how important it is to deliver steady regular changes, small enough to make the innovations stress-free for your team and your users.

How we build the process

Phase 1. Exploring the domain

To understand how the application is used we drill into the customer's domain.

Gaining knowledge of the customer's domain language is especially important as we plan how to pass data objects from Java to JavaScript and back when implementing the hybrid web-desktop solution.

We usually do it using EventStorming methodology by Alberto Brandolini, which is a way to describe any complex domain and its processes.

Phase 2. Design and Implementation

As soon as we know where we are starting, we can move forward with the step-by-step improvements.

1. Selecting the web UI toolkit, based on the client's needs and preferences.
2. Creating the UI style for web-based components. Our designers take the current style of the app's UI and bring modern touches in coordination with the client.
3. Implement the UI using the toolkit selected for the project. When it comes to coding, we pay special attention to code quality, tests, and architectural design. It's a must-have for keeping the resulting product maintainable for years to come.
4. Replace a part of the desktop UI with the web-based UI. This can be done, using our own integration library – JxBrowser with its Chromium-based component or other solution, best fitting the customer's project requirements.
5. Repeat iteratively with other parts of the UI, collecting the user feedback and adjusting as necessary.

Phase 3. Support and Maintenance

If necessary, after the project take-off we will keep providing technical assistance and updates for your application on a regular basis.

SELECT A WORK MODE THAT SUITES YOU

Having worked on a variety of our clients' projects from multinational corporations to start-ups, we are effective in a range of cooperation modes.



Turnkey app modernization projects

We handle the whole process from initial assessment to design and implementation. After the final delivery, we support and maintain your app if needed.



Working as a part of your team

Our UI/UX developers and browser-native integration specialists bring their expertise to help with a certain area of your modernization project.

Control the costs

We offer a work-order-based project cost management process, where each design and development stage is estimated and pre-approved with the client.

We are where you need us

As a Portugal-based company with developers all over Europe, we are available to travel to discuss and work on your project in person.

ON THE TECHNICAL SIDE

If you have an application, based on **Java AWT/Swing, JavaFX, SWT, Eclipse RCP, JNI, C/C++, COM**, we can help you with migration, as we have experience in creating hybrid solutions for these technologies.

To develop a modern front-end for your app we would suggest using **React, Angular, Vue.js, Ember, or Flutter**.



We use **JxBrowser**, our Chromium-based component since 2008, to link Java backends with web UIs but can suggest alternatives if needed.



JxBrowser

If you are thinking of scaling and optimizing your app's infrastructure, our engineers will create an efficient solution based on **Google Cloud Platform** and **Amazon Web Services**.



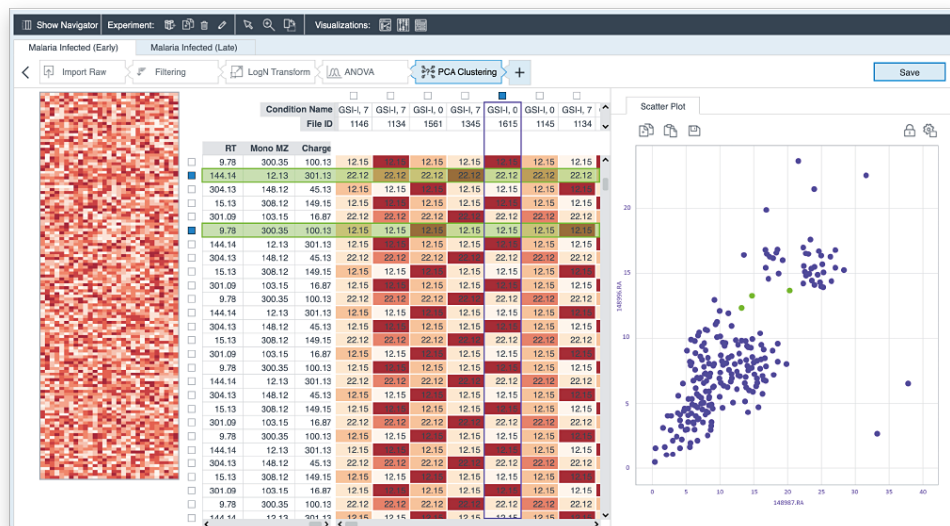
EXAMPLES OF OUR MODERNIZATION WORK

Domain. Bioinformatics and life sciences.

Product. A platform for mass-spectrometry and data analysis.

Challenge. Huge amounts of raw data obtained from mass-spectrometer devices had to be structured, transformed, and visualized to be available for further analysis.

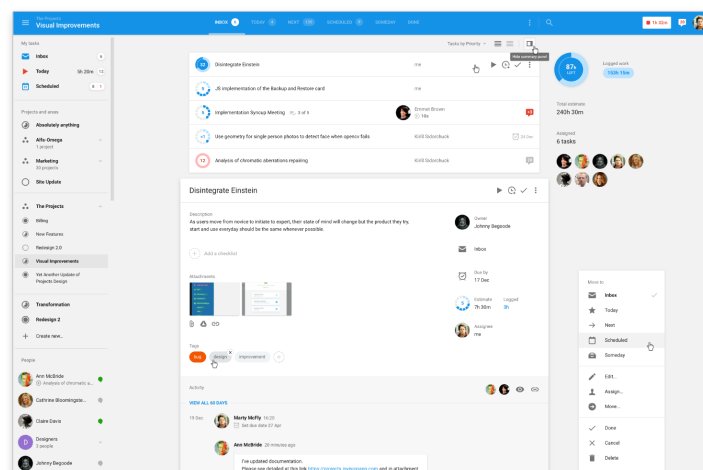
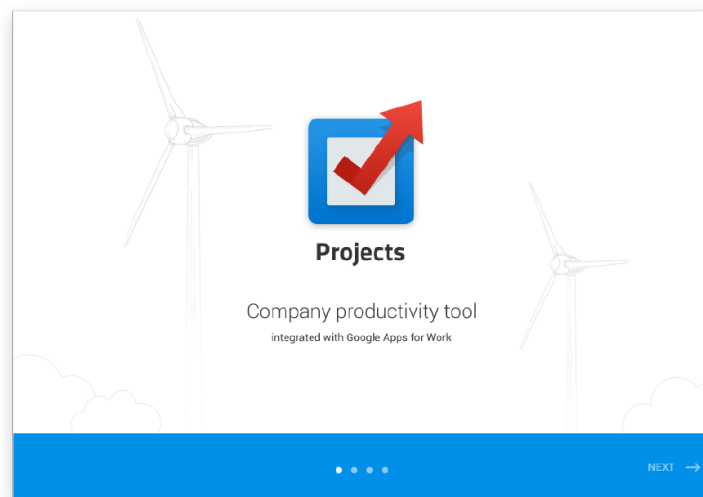
Solution. We developed a hybrid desktop application with a UI based on HTML, CSS, and JavaScript, allowing the users to process, search/filter, and conveniently analyze mass-spectrometry data.



SOME OF THE UIs WE'VE BUILT

Projects

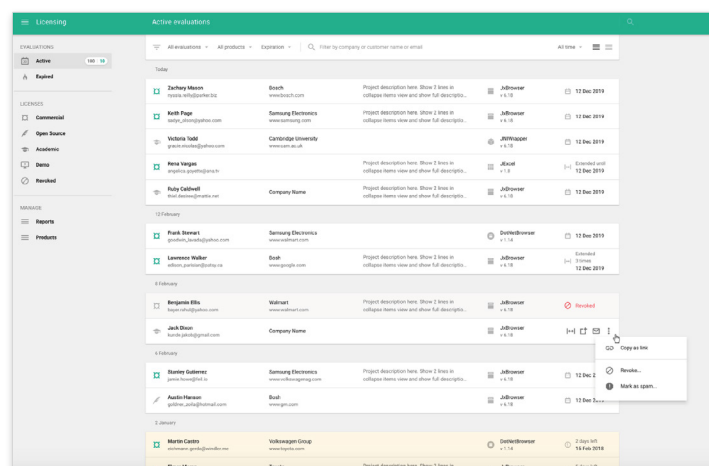
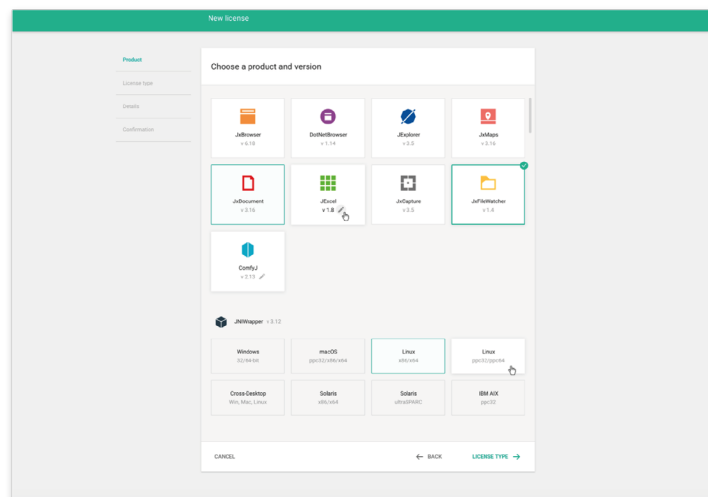
Project management application for Google Workspace for individual and team task tracking, providing clear task prioritization, easy collaboration of all team members, an intuitive and visually clean UI, and integration with standard Google Applications (Gmail, Groups, Drive).



SOME OF THE UIs WE'VE BUILT

License Server

With multiple products each coming with different licensing models and pricing tiers, we ourselves need the effective tool to manage the product distribution – from subscription renewals to taxation and executive reports. So we designed and developed a solution allowing different company divisions obtain and manage the information they need to keep our customers' licences up-to-date in a neat cloud-based way.

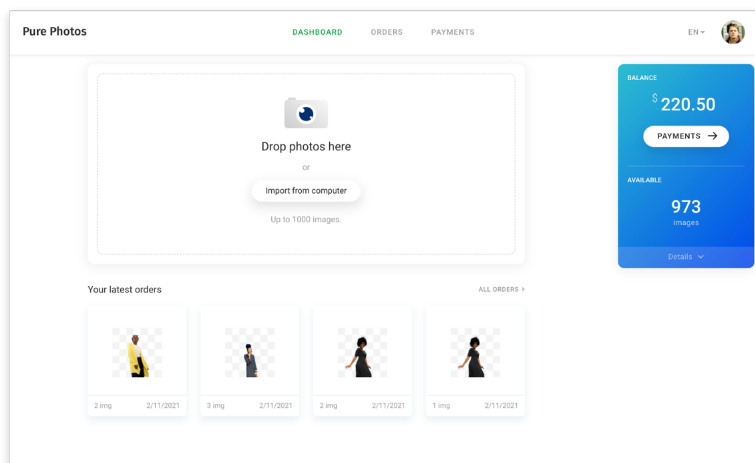
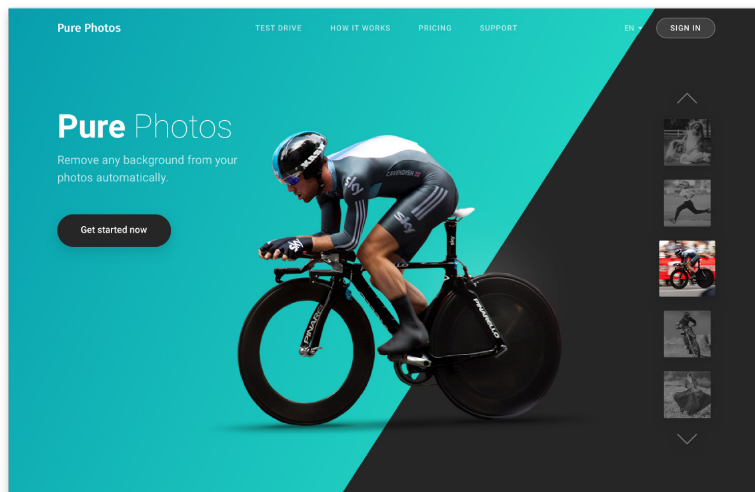


SOME OF THE UIs WE'VE BUILT

Pure Photos

Pure Photos is an online tool for automatic background removal and replacement. It is based on AI and computer vision algorithms, trained by our developers specifically for school and volume photography needs.

The platform provides users with a convenient feature-rich UI to upload and process their imagery, and effectively manage high-volume photography workflow during the busy seasons.



HOW OUR CLIENTS MODERNIZE

Inductive Automation

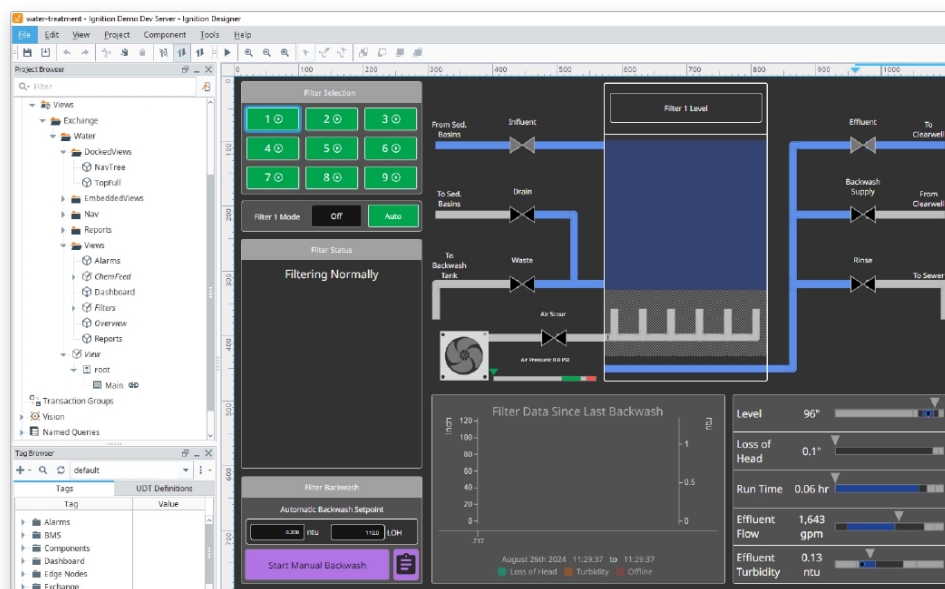
Domain. Industrial automation software.

Product. Ignition® – a platform for supervisory control and data acquisition systems in manufacturing, energy, utilities, etc.

Challenge. To enable their clients to collect, store, and display data meaningfully and manageably, the Inductive Automation team decided to modernize the user interfaces of their platform, using the web-based approach. However, they still needed to ensure compatibility with their older industrial control software used by many companies.

Solution. Inductive Automation developed a hybrid solution, with JxBrowser as a way to display web components in a Swing-based implementation and to render the complete user interface in the JavaFX version of their application's client runtime.

This helped their solution stand out among conventional offerings, planting the company's flag on the future for supervisory control and data acquisition software, which has a user interface.



HOW OUR CLIENTS MODERNIZE

Mercur Solutions AB

Domain. Business intelligence software.

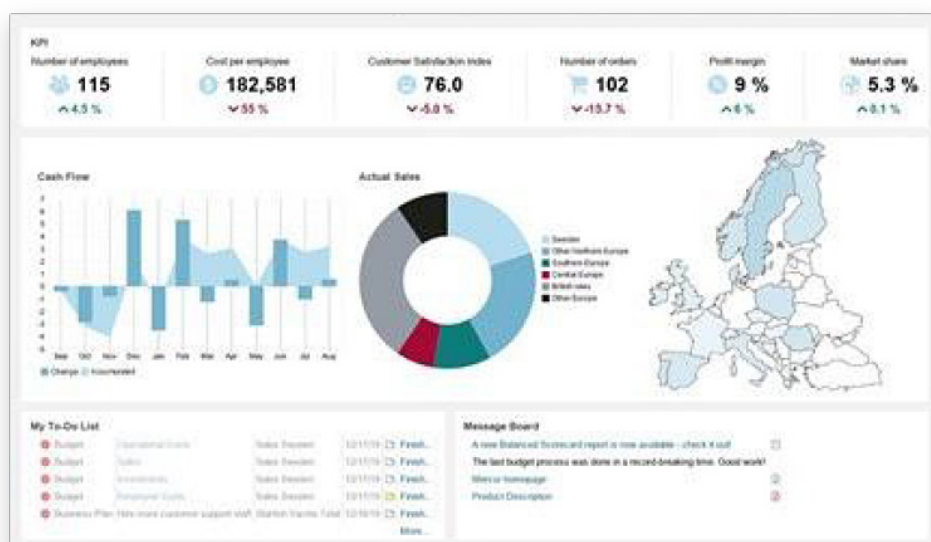
Product. Mercur Business Control® – an application for budgeting, forecasting, reporting, analysis, and strategic target management, mainly in the financial domain.

Challenge. On the track of developing and modernizing their product, Mercur Solutions AB created the web client for their application which initially had only a desktop Java Swing-based version. The web technologies enhanced the app's interaction and visualization capabilities greatly.

However, the need to support the desktop version persisted as many of the app's corporate users had their business processes long-established around the in-house implementation.

Solution. As the development team was willing to focus their effort on a more promising web version while needing to keep their desktop app up-to-date with the latest improvements, they decided to integrate the web version into the desktop client using JxBrowser.

This allowed Mercur Solutions AB to further develop the cloud direction of their business without compromising on the relations and support of their long-term corporate users.



WHOM WE HELP

Customers

We are honored to earn the long-term trust of the 3000+ companies that form the future of the world's most advanced industries.



[and many more ↗](#)

Domains

Providing technical assistance and support to our customers, we are used to getting in touch with the new domains. Here are some of the spheres our products are used in.

- Technology
- Airspace
- Automotive
- Engineering & construction
- Defense & Security
- Science & Research

- Banking & Finance
- Insurance
- Healthcare & Biotech
- Consumer goods
- Foods

- Government
- Education
- Public organizations
- Telecom & Media
- Consulting

For an initial consultation, contact us


✉ sales@teamdev.com

☎ +351 91 386 40 20


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