



Moving from Oracle® Reports to Jaspersoft®

The 4 step migration path from
legacy to modern reporting



Who should read this?

This book is written for developers, report designers, IT managers, enterprise architects, infrastructure administrators, technology executives—and anyone who directly or indirectly works with Oracle Reports.

From both a business and a high-level technical perspective, this ebook examines why and how to migrate from Oracle Reports to Jaspersoft reporting and embedded analytics and includes results from one use case.





What's happening to Oracle Reports?

In its 2021 Statement of Direction, Oracle has announced that Oracle Reports is no longer under active development which means that there are no plans to add any additional functionality to the product.

Even Oracle itself removed Oracle Reports in July 2024 from the very popular E-Business Suite. Because reporting is a critical requirement for many enterprises, a clear and reliable migration plan is needed.

Options

Stay Legacy

Stick to Oracle Reports and keep maintaining your reports with current technology. Hold off on migrating to a new solution until it is absolutely necessary.

Migrate and Modernize

Migrate away from Oracle Reports to a modern reporting solution that is being actively enriched and supported.

Option 1: Stay legacy

Migrating to a new reporting system is scary.

Migrations can be highly complex and may put critical data and systems at risk. With so much at stake, it is natural to be wary of migrating at all. If Oracle Reports seems to be doing enough of what you need, it's easy to understand why staying legacy could be an option. But let's take a closer look at the pros and cons of sticking to the status quo.

Pros

- **No new software to install.** Just continue with Oracle Reports.
- **No new learning required.** Stay with a technology and process you know.
- **Avoid migration risks.** Avoid problems like broken report designs, queries, and security configurations.

Cons

- **Technically, you are stuck.** It's difficult to integrate legacy systems with modern software which holds organizations back from innovating with new data sources, applications, and deployment techniques. In addition, the base system may run out of support, which may cause regulatory compliance concerns or force you to migrate the entire stack. Or, even worse, a piece of hardware stops working with no replacement parts available.
- **You're wasting money.** Legacy systems can be expensive to maintain and support. It can also be difficult, and come at a premium, to find developers with specialized experience or the desire to work with products, which have reached their end of life (EOL) to make necessary updates that adapt to the businesses evolving needs.
- **Puts the organization at risk.** Oftentimes, legacy systems can be more vulnerable to security issues that would require new patches or updates. They may also be incompatible with modern security features and techniques, putting confidential data at risk and making it more difficult for organizations to detect and respond to cyber threats.



Option 2: Migrate and modernize

While avoiding a painful migration has obvious appeal, in reality that option is only delaying the inevitable.

Migrating to a new system is not a matter of if, but when, it needs to be done. And as you will see, taking a proactive approach to modernize your reporting is the best way to reduce the risk of migration, position your organization to lead with innovation, and capitalize on new business opportunities.

Now, the pros and cons of migrating from Oracle Reports to a modern reporting platform . . .

Pros

- **Increased business agility.** Modern flexible architecture allows you to leverage emerging data sources, deployment methods, and advanced APIs.
- **Reduced costs.** You can increase productivity, reduce maintenance expenses, and save a significant amount with more efficient and optimized resource utilization.
- **Rich new features.** Interactive charts and advanced support for seamlessly embedding ad hoc reports into applications can bring insight and agility to end users.
- **Consolidation.** Modernization is always an ideal opportunity to clean up old applications and reports to centralize and consolidate them into an integrated framework.

Cons

- **Difficult to scope.** In many cases, migrations can be complex and challenging, making it tricky to define the investment of time and cost.
- **A lot of work.** You may need to rewrite legacy code for each report and reconfigure an environment that's compatible with the new system.
- **Potentially risky for data and systems.** Reports and data need to be properly secured and redefined for the new environment.





And the winner is...

Migrate and modernize

Why migrate and modernize? To survive in today's business climate, your organization needs to adapt to changing demands. Doing so requires the ability to access data wherever it is—whether in a traditional relational database or more modern databases like NoSQL and even web service data sources. You also need software that is flexible and agile so you can react to market changes quickly as they are identified. This agility is possible with an API-first solution like Jaspersoft that can be deployed to any cloud, on-premises or hybrid environment and is compatible with container technologies like Docker.

Modern reporting solutions deliver these benefits plus identity management integration and advanced multi-tenant support. Oracle Reports simply isn't capable of tapping into opportunities that are accessible to its modern reporting cousins that contain the latest features to power data-driven decisions.

Modern reporting solutions

Priced for scale

- Pricing is based on the deployment model and the required computing power or independent software vendor (ISV) needs. This makes reporting much more affordable for large deployments and in use cases where developers want to redistribute Jaspersoft inside their application.
- No upgrade fees.

Flexible, open architecture

- Connect to any data source.
- Deploy using any method to any cloud, on-premise or hybrid environment.
- Use modern web services APIs for powerful, granular control over reporting inside your application.

New features users love

- Support for interactive HTML5 charts and custom data visualizations.
- Configurable in-memory engine to optimize response times.
- Advanced multi-tenant support.
- Identity management integration.



Why can migrating to a new reporting solution be hard?

Difficult to scope

Reporting environments can consist of hundreds or thousands of reports. Each report may have its own design, use different data sources and queries, and be delivered to different people. With so many factors to consider, the scoping process alone can be overwhelming.

Painful to execute

Once scoping is complete, the process of converting your existing reports and environment to the new solution begins. For the most part, this is a manual effort. A documented process is a necessity, but even then, migration can be extremely time intensive.

No margin for error

Reporting systems are often deeply embedded in day-to-day operations and critical processes. The migration must be done seamlessly. Mistakes can prevent key information from reaching an employee or customer.

What do you need to make it happen?

Proven processes

It's critical that you have a blueprint that outlines and addresses how you will handle report designs, queries, scheduling services, and integration with employee directories and security systems.

Automation

Unless you have a burning desire to rewrite all of your reports and queries, you're seeking some level of automation.

While it is unlikely that everything can be automated (complex reports and custom functions are common examples), you will thank your lucky stars for every report and chunk of code that does not have to be manually rewritten.

Expertise at a FIXED price

While not a requirement, having an expert on board to steer your migration process will help you finish sooner and ensure you are safely moving systems without downtime.

The best experts will follow a proven process and provide some level of automation. Just be sure they offer fixed pricing to avoid unexpected costs.

Modern reporting technology

Of course, you need a migration target. In addition to desired architecture, functionality, and pricing, seek information from those who have migrated to the reporting software you are considering.

Has a migration from Oracle Reports to your target technology been done successfully? Search online and learn from others who have gone through this experience already.

Learn about our customers' experiences with Jaspersoft at
<https://www.jaspersoft.com/customers>.





Meet the Oracle Reports migration solution

PITSS is an award-winning specialist in digital transformation for legacy Oracle systems.

Using a combination of specialized software and technical expertise, the PITSS team migrates customers from Oracle Reports to the Jaspersoft commercial edition reporting platform. With many successfully completed projects, PITSS has the expertise and software specifically designed to migrate your legacy system to the Jaspersoft software's open architecture and rich feature set.

Why Jaspersoft?

Modern reporting technology

- **Open architecture.** Connect to any data source, deploy anywhere using any method, work with modern RESTful APIs.
- **Pixel-perfect precision.** Design any report, document or form you need and export to any format you require—from printed PDFs to fully interactive reports on the web.
- **Self-service reporting.** Users can slice, dice, and create compelling data visualizations and reporting whenever they need it. No application download required.
- **Seamless embedding.** A JavaScript library allows developers to embed data visualizations and analytics into applications with a low code/no code approach
- **Migration friendly.** Open source JRXML format facilitates conversion from other platforms.
- **Cost-effective pricing at scale.** Pricing is based on CPU cores or ISV requirements.

Why PITSS?

Proven, best-practice processes

Award-winning processes and extensive experience has prepared PITSS to handle the toughest migrations.

Automation

Specialized automation software and deep expertise significantly shortens migration time so you can deliver your reporting solution fast.

Fixed pricing

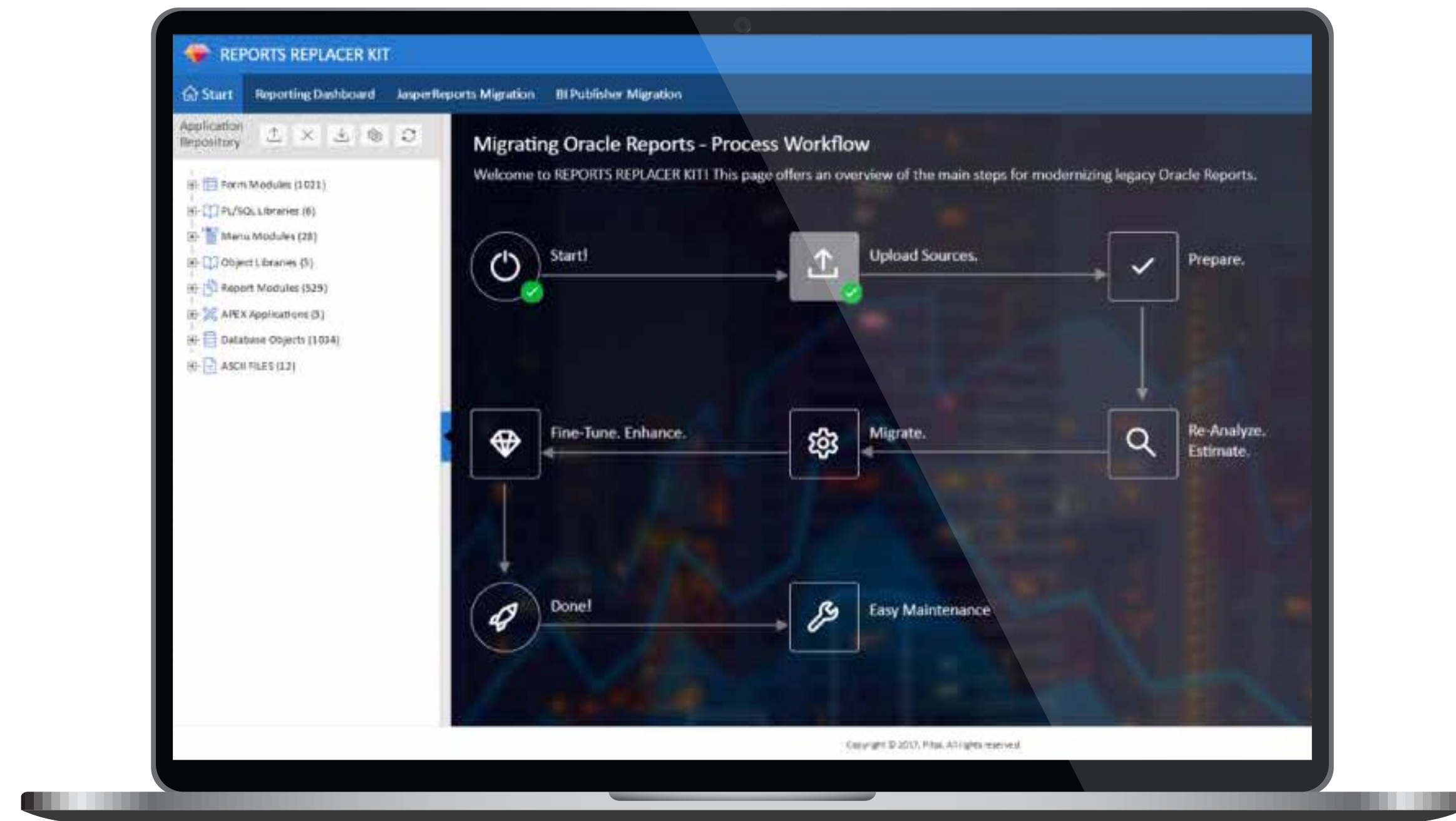
You will receive an accurate quote on your project. No surprise invoices after the project ends. You can select and pay only for services that align with your migration needs.





Oracle Reports to JasperReports in 4 steps

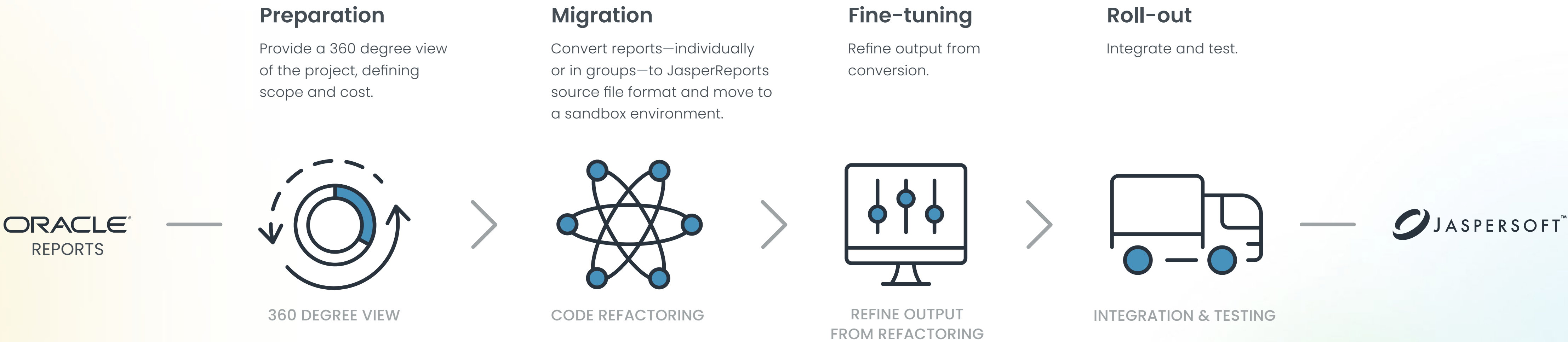
Using a combination of proprietary automation software and best practices, PITSS technical migration specialists offer a full-service migration path for organizations seeking to move from Oracle Reports environments.



At the core of every migration is PITSS.CON, all-in-one legacy code and application analysis and transformation software. This tool is used in all four steps to analyze, prepare, refactor, manage, and even document your entire migration.

The PITSS.CON process workflow diagram helps you understand where your project stands at any point in the migration.

4 step migration process



We'll review each step in more detail.



STEP 1: Preparation

The PITSS.CON tool is used to provide a comprehensive analysis of your existing reporting environment and to detail the work required for each of your reports.

The project dashboard helps define the scope and expected costs of your migration.

Scope of work

- Reports cleaned of dead code as well as unused and redundant objects
- Business logic analyzed and adapted to target environment
- Reports refactored for optimal migration that is often automated
- Documentation of changes made by PITSS.CON and what remains to be done

Total complexity of migration is segmented and summarized.

Individual reports are listed and ranked by complexity.

The screenshot shows the 'Reports Modeler' application interface. It includes a sidebar with a search bar and a tree view of the application repository. The main area displays a 'Complexity Assessment' dashboard. At the top, there's a donut chart showing the distribution of complexity: 33% (blue), 20% (orange), and 48% (green). To the right is a bar chart titled 'Most complex reports' showing the complexity of various reports. Below these charts are four data tables: 'Data Model', 'Layout', 'Business Logic', and 'Queries'. The 'Data Model' table lists queries, groups, columns, and data items. The 'Layout' table lists frames, fields, graphics, and file links. The 'Business Logic' table lists program unit types, functions, and triggers. The 'Queries' table lists queries, groups, and data items.

Queries across reports are logged and counted.

Data links establish relationships between multiple queries.
(The quantity and complexity of related queries increases the migration challenge.)

Functions are categorized and grouped by logic type.



Step 2: Migration to the sandbox environment

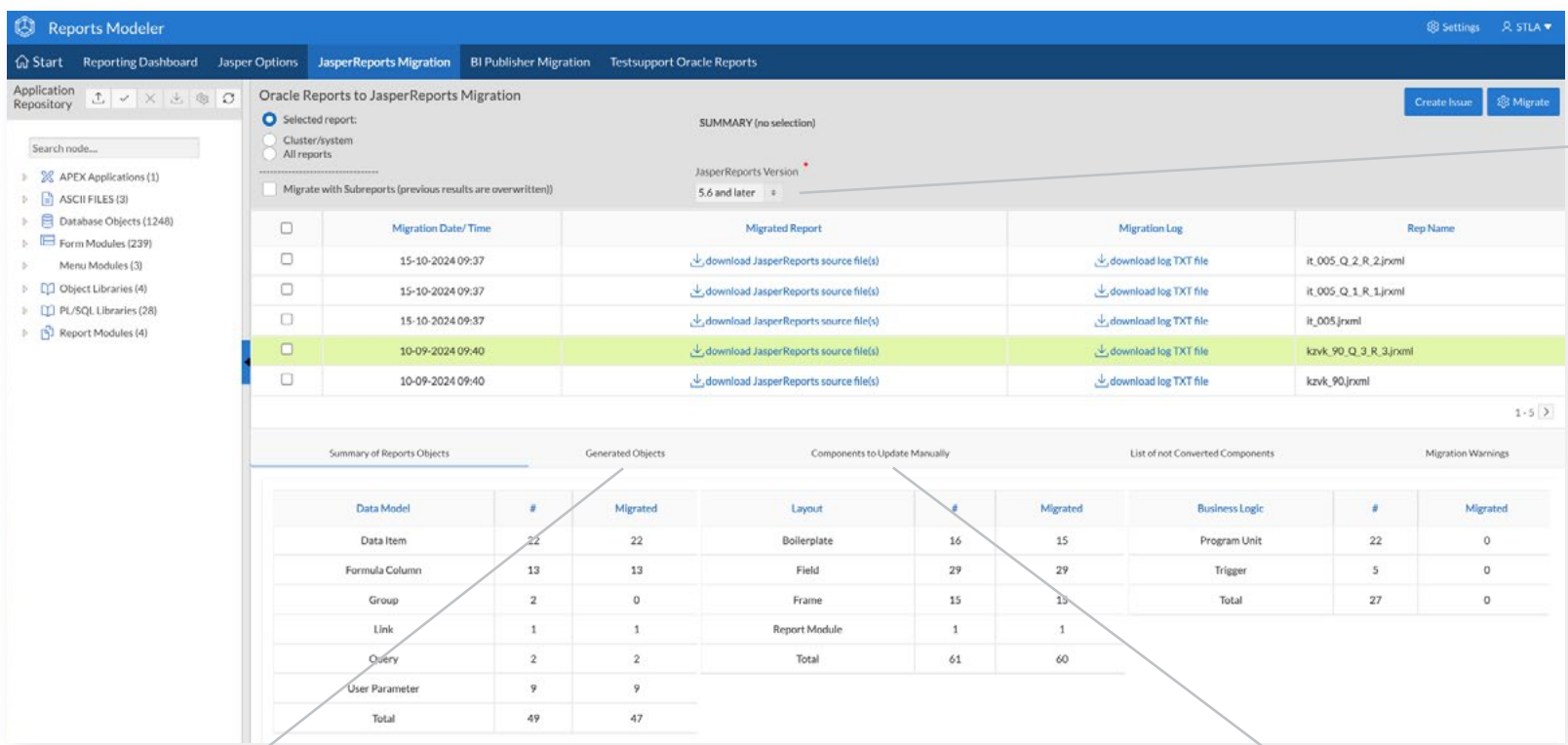
This is where the magic happens.

Once reports have been analyzed and prepared, the actual migration can begin. PITSS converts designated reports from the Oracle Reports file format to the JasperReports source file format. Successfully converted reports are deposited in a sandbox environment.

Scope of work

- PITSS.CON Suite customized for your project
- Data service layer extracted from existing architecture
- Individual or batch conversion of reports
- Feedback loops and quality checks'
- Project documentation
 - Legacy architecture (code allocation, program sizes, lines of code, complexity, analysis, and more)
 - Status as described in the screen capture

This is your migration console. From here, you can select a report for migration and choose to migrate one or more reports at a time. With each migration attempt, a detailed log is generated providing metadata on whether or not a report was successfully migrated. If migration failed, a clear diagnosis is provided to help you understand exactly where the problem lies and how PITSS will fix it.



Selectable target version of JasperReports

All reports and report objects that have been successfully migrated

List of complex report components that need to be migrated manually

What gets automatically converted?

Up to 95% of the Oracle Report data structure

The PITSS.CON tool migrates almost the entire data model. All objects respect the same architectural principles and development best practices. The architectural basis will look deliberately crafted and will be easy to extend and maintain for the years to come.

75% of visual components

All objects having a clear correspondent in the new technology will be automatically migrated. For objects not having a clear JasperReports correspondent, workarounds and manual fine-tuning will be necessary.

Up to 50% of business logic

Up to 50% of PL/SQL code can usually be eliminated during the PITSS.CON analysis. (This cleansing process dramatically reduces the complexity and thus work required to fine tune and test reports in Step 3.) The tool offers options for migrating the remaining logic to the database or to Java. Manual redesign is necessary to assure the quality of custom-built code.





Step 3: Fine-tuning

The output from Step 2 is assessed and reports are fine-tuned to look and behave as they did prior to migration.

Testing provides a clean, organized environment to support the inspection and correction of each report. The amount of fine-tuning required is dependent on the complexity of the reports. Data models and visual components tend to migrate at a higher success rate than custom functions and other objects that may not have a correspondent in JasperReports.

Scope of work

- Complete report migration to the sandbox environment
- Test all reports
- Fix bugs
- Project documentation





Step 4: Roll-out

Moving the sandbox environment to a live production server is the final step in the migration project.

Once this is complete, your migration from Oracle Reports to Jaspersoft is complete and you can now deploy new reports to your Jaspersoft production environment.

Scope of work

- Unit tests to ensure everything is working as expected
- Ensure your Jaspersoft environment is fully functional

Testsupport Oracle Reports Migrationen

Home Alle Berichte Reports Replacer Kit QuickCheck

Alle Profile

Profile auswählen

Jasper Unit Tests
Jasper WebServices
Reports WebServices
Reports Commandline
BI Publisher-WebService
BI Publisher-Data XML

	Id	Beschreibung	Format	Endpoint	Erstellt Am
☒	...	KISS_SCHMELZENUEBE...	Oracle Reports	/default/	25-AUG-2021
☐	...	SLS_SCHMELZENBERIC...	Oracle Reports	/default/	25-AUG-2021
☐	...	SLS_SGA_GIESSPROG...	Oracle Reports	/default/	25-AUG-2021

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Parameters für Testfall1

	Parameter_No	Name	Beschreibung	Wert	Erstellt Am
☐	16	VBEZSCHMELZE	VBEZSCHMELZE	Testfall	25-AUG-2021
☒	17	VSCHMELZEID	VSCHMELZEID	42	25-AUG-2021

1 rows selected

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SLS_XXXXXXXXXBERICHT

		Zu Parameters	Name	Erstellt am
☒			Testfall1	25-AUG-2021
☐			Testfall2	25-AUG-2021
☐			Testfall3	25-AUG-2021
☐			Testfall4	25-AUG-2021
☐			Testfall5	25-AUG-2021

1 rows selected

1 - 5 of 5

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Report Id

	Report Id	Modlog
☒		

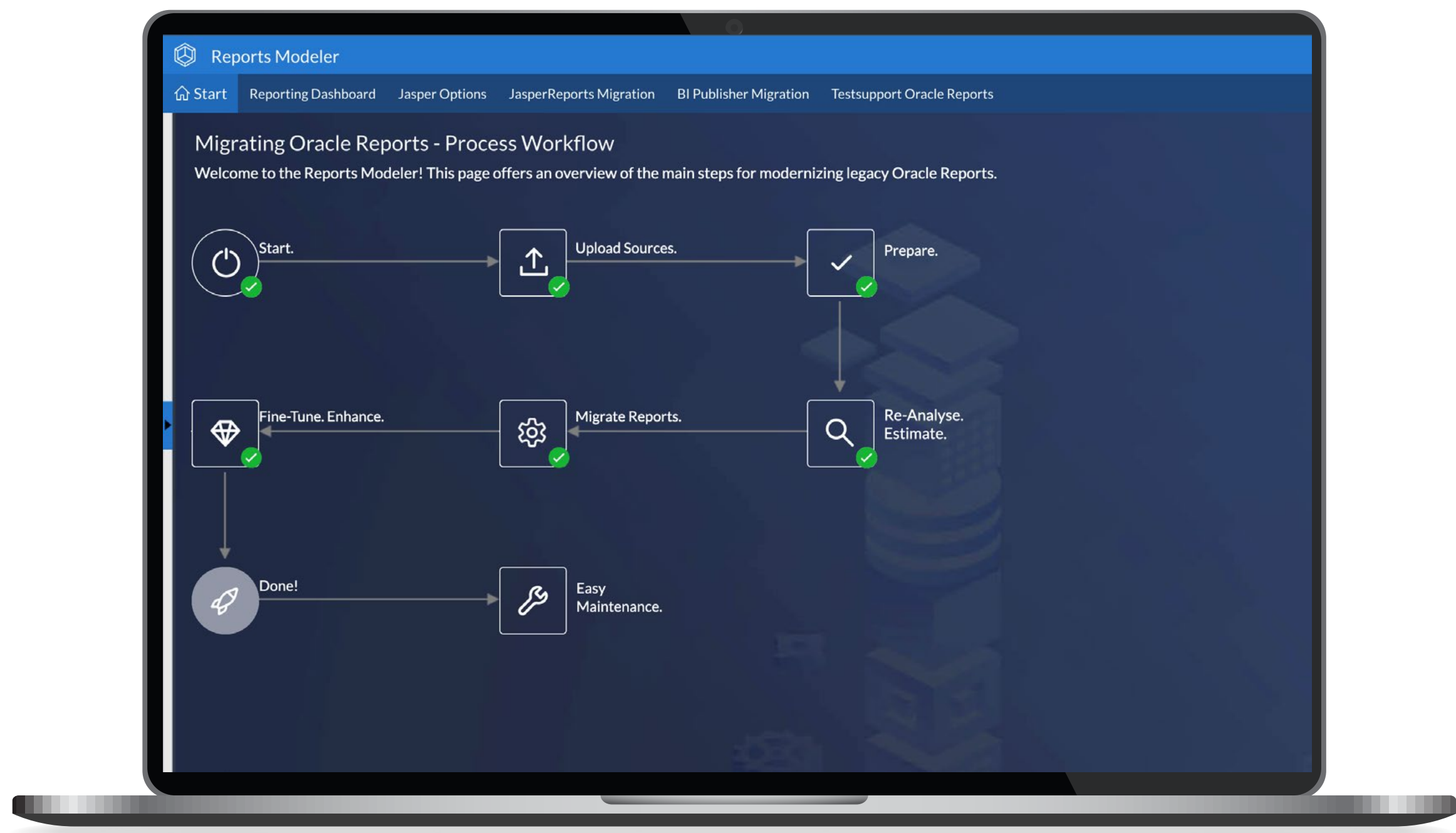
1 rows selected

Total 1





The completed process



If needed, you can revisit project documentation

Use Case: Modern reporting for modern kitchens

Due to ending support and a lack of desired features, a global kitchen cabinet manufacturer engaged PITSS to migrate its large Oracle Reports environment to Jaspersoft.

Environment

Oracle Forms: 1,021

Oracle Reports: 529

- Complex: 34
- Average: 121
- Simple: 374

Nice to haves

- Templates to create reusable report modules and objects
- Language translation support, including for data formats
- Flexible architecture and web services APIs
- Mobile client compatibility for report viewing

Timeline

- Project was completed in 150 man hours over two months.

Requirements

- Preserve exact look and feel of reports
- Connect to data sources beyond Oracle DB and CSV files
- Fixed price for the project

Migration process

- Quick check is conducted. Top 10 reports are analyzed to get a sense of scope.
- All reports are analyzed in Step 1.
- Reports are sorted by complexity, with 93 simple reports identified and migrated first.
- Some remaining reports are discarded because they weren't used. Remaining reports are successfully migrated and fine tuned.



How to get started?

[Start now](#) and let us show you how you can migrate your own Oracle Reports and modernize with Jaspersoft.

[Explore](#) the Jaspersoft commercial edition with a 30-day free trial..

ABOUT PITSS

PITSS is the leader in digital transformation for legacy Oracle systems because of its tools, team, and expertise. The PITSS team has led thousands of projects for more than 1,000 customers in more than 40 countries. No one knows Oracle systems like PITSS. Let us take you from planning, to pilot, to the cloud, and beyond. Learn more at www.pitss.com.

ABOUT JASPERSOFT

Jaspersoft is a leading provider of developer-grade reporting software, with over 600,000 downloads per month globally. Jaspersoft provides developers and business users the ability to create, embed and distribute highly interactive, pixel perfect reports, ad hoc reports, dashboards and analytics into their applications to enhance the end-user experience. These tools give Jaspersoft’s over 1,100 customers around the world the ability to meet their reporting requirements, gain insight from multiple data sources and ultimately make better decisions. For more information, visit www.jaspersoft.com.