



Case Study | HARK

HARK lays the ground- work for modernization on IBM i – with PKS Assessment & eXplain



„It was important to us not to rely solely on gut feelings, but to establish a solid foundation for the coming years:

Where do we really stand from a technical stand- point, what are the risks – and what practical steps will move us forward?

The assessment with PKS provided exactly that transparency. What was particularly impressive was that it resulted not just in a report, but in a clear implementation road- map – including the next concrete steps.”

Frank Schültingkemper
Management
Hark GmbH & Co. KG



Success Story:

HARK lays the groundwork for modernization on IBM i – with PKS Assessment & eXplain

As a long-established company in the field of fireplace and tiled stove construction, HARK has relied for many years on an IT infrastructure that has evolved over time and is precisely tailored to its own processes. To ensure that these core systems remain maintainable, scalable, and compatible with team collaboration in the future, HARK has worked with PKS to lay the groundwork for a structured modernization roadmap.

The starting point:

Proven custom software, a smaller IT team, and growing modernization needs.

Since its founding in 1971, HARK has been developing and operating custom-programmed applications on the **IBM i platform**. The RPG applications, which have evolved over decades, were maintained and expanded by a succession of internal developers; the current team is lean. Previous attempts to replace the custom software were abandoned in favor of continuing to use it.

This situation created a dilemma typical for IBM i users: functionally stable, but technically burdened by legacy issues and **a lack of documentation**, which makes onboarding and scaling difficult and prevents the creation of a realistic roadmap.



„The eXplain-based assessment helped us examine the application in a structured way: cleanup, clustering, quality and technology analysis – and, in the end, clear prioritization.

For us, this is the decisive step, because we now know where we can achieve quick wins with manageable effort and where we need to make targeted investments. The fact that PKS is implementing the next steps directly with us makes the transition from analysis to modernization very efficient.”

Peter Engstfeld
IT-Leiter
Hark GmbH & Co. KG



The pressing questions at HARK were therefore very specific:

- **What is the application's actual technical condition** (code base, quality, risks)?
- **Are there any deal-breakers** that could prevent modernization or cause costs to spiral out of control?
- **Which measures** are practical, forward-looking, and worth prioritizing?

This is exactly where PKS comes in with a structured assessment: establishing the facts, identifying risks, and developing a practical roadmap based on them.



The solution:

Mini-Assessment with eXplain as a “Foundation for Decision-Making”

HARK commissioned PKS to conduct an IBM i software assessment in order to inform its strategic decision and approach to modernization **based on the system's technical health and clearly defined areas for improvement.**

Assessment Procedure (PKS Methodology)

PKS consistently relied on a tool-based approach using **eXplain**:

- 1. **Setting up eXplain**
(Installation/Configuration)
- 2. **Clean Up**
(Adjusted for unused objects/sources)
- 3. **Clustering**
(Breakdown into functional entities, including transparency regarding interdependencies)
- 4. **Analysis/QA**
(Quality, Technologies, Risks)
- 5. **Recommendations for Action & Planning Proposal**

Key findings:
Transparency, quick wins, and clear priorities

The code base has already been significantly streamlined through the cleanup (approximately **47% reduction**), which noticeably reduces the effort required for onboarding and modernization.

At the same time, it became clear that while the presence of various RPG dialects and fixed-format elements makes it difficult for new developers to get up to speed, the overall **code quality and maintainability of the native IBM i components can be rated very highly** (eXplain rating: **4.2 out of 5 stars**).



Key takeaway for management: There are **no fundamental deal-breakers** that would prevent modernization for continued use.

From Analysis to Implementation: A 12-Month Roadmap

Based on the assessment results, PKS developed a pragmatic 12-month roadmap with three key priorities:

- 1. **Organization & Processes**
(DevOps/Requirements Management, Tooling, Standards)
- 2. **Documentation Structure & Methodology**
(Feature list, central documentation, knowledge building)
- 3. **Technical Optimization**
(targeted reduction of technical debt, modernization of the codebase)

Specific components included a developer’s guide/standards, change and requirements management, as well as tool support for SCM/build/deployment (e.g., eXplain, Git, etc.) and, in parallel, technical cleanup and modernization (e.g., critical GOTO statements, loop issues, type violations, I/O without error handling, transition to ILE/Fully Free RPG).

The next step:
Implementation & Modernization Modules

The key point:
HARK didn’t stop at the report, but immediately took the next steps with PKS:

1

eXplain Licensing & IBM i Code Cleanup

Based on the assessment priorities, HARK is launching an implementation phase with PKS that specifically addresses the identified technical “cost drivers” (including type violations, critical GOTO statements, cyclic dependencies, and the externalization of internally defined display/print files) – including optional training on how to use the tool.

2

Design & prototyping of modern web interfaces and DB2 access

Following this, the next phase of modernization was initiated: the design and prototyping of modern, web-based interfaces, including high-performance DB2 access. The goal is to replace Access-based reporting logic with native DB2 access and to move away from 5250 screens toward modern web interfaces/ dashboards (using Valence as the recommended platform, among others).



Benefits for HARK: Modernization becomes predictable, low-risk, and team-oriented

- ✓ **Clarity over gut feelings:**
Technical condition, risks, and priorities are clearly visible.
- ✓ **Generational transition underway:**
IBM i applications will also become accessible to young talent, thereby ensuring their long-term value to the company.
- ✓ **Faster onboarding & less effort:**
A significantly streamlined codebase as the foundation for modernization.
- ✓ **Implementation begins immediately:**
Visible results all the way to the end user through the announced web interfaces.

Conclusion: Assessment as a catalyst for modernization

HARK demonstrates how modernization on IBM i can be achieved **not through a “big bang”** approach, but by building on a solid foundation: first, transparency and prioritization through an eXplain-based assessment, followed by targeted implementation using technical, organizational, and UI/data-access-related modernization modules.

„From the very beginning, HARK’s approach has been about making modernization predictable – without scare-mongering, but based on facts.

The assessment allowed us to demonstrate that the foundation is solid, there are no deal-breakers, and at the same time, there are clearly identifiable areas for improvement that will further enhance maintainability and team collaboration.

The close collaboration with our colleagues at HARK was particularly valuable – it allowed us to arrive at reliable results very quickly and move directly into the next phase.“

Michael Blank
Team & Project Lead
PKS Software



The Company:
**HARK Fireplace &
Tiled Stove Construction**

HARK is one of Germany's leading manufacturers of fireplaces, wood-burning stoves, tiled stoves, and pellet stoves. The family-owned company was founded in 1971 in Duisburg-Rheinhausen and has been combining traditional craftsmanship with technical innovation in fireplace construction for more than five decades.

Today, HARK is represented by more than 60 company-owned showrooms as well as additional authorized dealers in Germany and other European countries.

The product range includes a wide selection of customizable fireplaces: from classic fireplaces and wood-burning stoves to tiled stoves and pellet stoves. HARK places particular emphasis on high-quality materials, energy-efficient technology, and solutions that can be adapted to different living situations and customer preferences. With technologies such as ECOplus, the company also focuses on clean combustion, high energy efficiency, and low fuel consumption.

From its headquarters in Duisburg, HARK develops, distributes, and supports its products for customers throughout Germany. With many years of experience, a broad network of showrooms, and comprehensive consulting services, HARK is now recognized as an established specialist in modern heating with fire.

For more information, visit
www.hark.de



CONTACT

Feel free to contact me

Take advantage of our experts' many years of experience.
We look forward to working with you!

We'd be happy to put you in direct contact with our reference clients upon request. Direct communication – it's that simple



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