How Profields transformed Jira in an enterprise project tracker

A success story of consultancy-based app design: from POC to Marketplace.
INDEX

INTRO

INDRA’S GLOBAL DELIVERY MODEL
Finding a cure for diverging teams

WORKING WITH DEISER AS AN ATLASSIAN SOLUTION PARTNER
Project Categorization
A proof of market maturity

INDRA’S ENVOLVING JIRA PROJECTS
Integration

SOLUTION: DEVELOPING PROFIELDS
Choosing a technology
Design principles
Custom field types
Project schemes
The Project Navigator

THE ORGANIC EVOLUTION OF PROFIELDS
Roadmap Themes

FEATURE HIGHLIGHTS

USE CASES

ABOUT
When Indra’s global delivery model planned to move its projects and services away from a high-maintenance in-house work management solution to Jira, the need to categorize over 3,000 projects with unsupported project metadata was a major stopper. DEISER’s consultants undertook a proof of concept for a project custom field plugin that eventually became Profields: a Marketplace leader and a reference for project managers who use Jira. Since its creation in 2011, Profields has evolved to support the administration of Jira projects, including Bulk Operations.
Finding a cure for diverging teams

It was early 2011 when Indra's Software Engineering & Architecture Unit decided to focus on an apparent cultural problem in its global delivery model. For a company that develops integral turnkey solutions for many of the most complex
and highly regulated activities of our age, the commonplace notion that “context matters” justified the tailoring of tools for particular needs. Because each software lab has separate systems administrators, growing **divergences jeopardized the top-down visibility of the portfolio of projects and services.** Even when similar workflows existed across sites, the lack of a unified nomenclature had created data silos.

The **need for standardized processes to run projects and services with shared metrics** across the software labs was the main reason for evaluating new work management tools that could replace legacy systems. Jira was selected for its reasonable cost, the standardizing power of workflows, and Atlassian’s open philosophy, which allowed Indra to exploit its pool of Java developers and embark on deep customizations of the tool, including bespoken plugins.

Jira was about to become the nuclear piece of the Suite Mind, a framework for Application Lifetime Management that included Confluence as a repository for knowledge reutilization, as well as third-party solutions for continuous integration or technical design, and in-house reporting tools. Projects were the central entity of this ALM framework.

**But the challenge of migrating over 17,000 users in 40 countries in a 24/7 schedule to Jira remained daunting** -it was then that Manuel Arranz, who oversaw the architecture for the Mind Suite, requested DEISER’s support.
Leonardo Díaz showed up at Indra’s Headquarters in Madrid the morning after receiving a call from Arranz. The product demo sparked an early warning: “Jira is a great tool for software developers, but it’s not a project management tool.” When Arranz shared the specifications document that placed Jira projects as the core management entity, Leo issued a second warning: “you’ll need time and muscle to get this going.” Confident about the capacity of his Java developers, Arranz replied they had both. DEISER initially focused in a gap analysis: each requirement was checked against Jira features; gaps were sought in the marketplace, and when no reliable add-ons existed, they were logged as new internal developments.

Once the initial specifications were covered, DEISER assessed and moderated two groups of experts from different areas of the company who designed standard processes for the provision of services and the delivery of projects. Any additional requirements followed the gap analysis process. As a result, one workflow for services and another workflow for projects were validated. The heart of the model was ready.
Project categorization

Arranz soon identified a major stopper for the migration in Jira’s project metadata. Without the possibility to segment projects and services by the vertical and horizontal markets, industries, sites, and customers where they pertained, the migration risked throwing the baby away with the bathwater.

A first attempt to categorize projects with the use of a marketplace add-on designed precisely to create metadata in Jira was rejected because new fields couldn’t be reused as the number of projects grew.

A new plug-in was conceived as a Proof Of Concept: could Jira be turned from an issue tracker into an enterprise project management tool?

A proof of market maturity

Issue 1991: Custom Fields for Projects

“As JIRA Administrator I need the ability to create custom fields for project(sic) in pretty much the same way as for issues. This way I will be able to store additional information per project and search for projects and issues based on these additional criteria”.

Creation: 2003/07/10 | Votes: 594
Guillermo Montoya, DEISER’s CEO, was aware that project categorization was a problem for most enterprise Jira customers, and suggested that DEISER’s app development team could take on the POC. The situation was ripe for a win-win solution that would outsource an important piece of Indra’s growing backlog while placing an add-on with great market potential under DEISER’s arm at a pivoting moment for the company, which was creating a new factory of Atlassian marketplace apps.

Montoya’s proposal was supported by robust evidence of market readiness. Issue 1991: Custom Fields for Projects, in Jira Server’s public backlog, was already 8 years old and had gained a strong traction since its inception. But many other factors concurred into a positive opportunity:

- A real customer could fund the development effort and test it
- A clear user story for Jira administrators was outlined in Issue 1991
- A broader community of users made the product scalable to long term profitability
- The new Atlassian marketplace would channel sales with little-to-none marketing efforts
- A manifest decision of Jira Server’s product managers not to address Issue 1991 reinforced the safety of the investment
When Arranz accepted the involvement of DEISER’s design factory, the new plug-in that would eventually be named **Profields** (after PROject custom FIELDS) started on its feet.

**INDRA’S ENVOLVING JIRA PROJECTS**

*From issue containers to management units*

Owing to its origins as an issue tracker for software developers and product managers, Jira rests on a simple structure at two levels: issues and subtasks. Jira projects are containers of issues with shared configuration settings and only seven information fields, including project name, description, URL, and an avatar. This small set of metadata is static and can’t be expanded, as issue 1991 reminds.

Indra’s project nomenclature is minimalist: start and end dates, technology, industry, location, and team. Articulating such a standard metadata structure was required to categorize, classify, sort, and report on projects, enforce corporate know-how, and support cross-team mobility.
Teams were not given the ability to create new project metadata specific to their work. “In our Jira instance, Profields has only evolved with time in that some fields have died, and others have been born. We’ve never encouraged the decentralized creation of new project templates and custom fields, because we want all teams to stick to our standards”, says Manuel Arranz.

Integration

In an early example of its flexibility, Profields was also used to integrate Indra’s in-house ERP tool, with a more detailed granularity that included WBS, and de-duplicate timesheet reporting. The problem was solved when a new project custom field was created to map Jira projects to the corresponding project entities in the ERP.
DEISER started developing Profields in the Fall of 2011 and launched it to the Atlassian Marketplace in May 2012. During the development process, Manuel Arranz acted as product owner, with Leo Díaz as the product manager in an agile process with sprints of three to four weeks and weekly reviews.
Choosing a technology

One of the first jobs of the Profields team was to analyze alternatives for the storage and retrieval of project custom fields. This is a summary of the main technologies that were evaluated.

**CUSTOM FIELDS (rejected)**

Jira provides custom fields at issue level. What if those fields could be used to store project information? While this solution allowed to eliminate database requirements outside Jira, it seemed inelegant and pointed at systematically duplicated data with important performance risks.

**JIRA PROPERTIES (rejected)**

Jira Properties use a dual key (meta tag) and value structure to mimic a relational database. This alternative to store data in Jira's own terms was already at use by many marketplace vendors at that time. However, the amount of manual work required to process and query stored data was ominous.

**ACTIVE OBJECTS (selected)**

Active Objects are an Object Relational Mapping (ORM) layer released by Atlassian with the aim of providing plugin vendors in their new marketplace with a data storage component. Being a novel approach in 2011, the evaluation stumbled upon low-confidence time estimates. In the end, however, this alternative was selected because it offered an ORM interface and real database storage.
Design principles

Turning Profields into an app that could be sold at scale and deliver value for any Jira customer implied a flexible, abstract, scalable, modular, and predictable solution, validating requirements if and only if they helped the product become a global response to Issue 1991. For instance, it was essential to allow customers to apply different metadata structures to different projects - a usage that was superfluous for Indra’s standardized processes.

Embedded in Issue 1991 was a clear design mandate: project custom fields would have to work “just like issue ones”. Profields had to remain loyal to Jira’s design principles. For the Profields team, the obvious implication of modeling projects after issues was that the new app had to behave like a project-dedicated module that followed the predictable patterns of Jira’s UI. In other words: DEISER’s goal was to create a project tracking add-on that wouldn’t feel like an add-on.
Some of the design decisions that followed were made to preserve a strict coherence with the existing functionalities at the issue level:

**Custom field types.**

*In Jira:* Jira custom fields undergo a controlled administration process that starts with the selection of the appropriate type. If every Jira user was given the permission to create custom fields, their numbers would skyrocket and jeopardize performance.

*In Profields:* Profields administrators can select between different types of project custom fields. The Proof Of Concept for Indra included String, Numeric, Date, Duration and User.
Project schemes: from structuring issues to structuring projects

In Jira: Schemes govern which issues contain which fields and are associated at a project level.
For example, a Jira admin can decide, for project A, that there will be three types of issues: support requests, bugs, and user stories. Schemes are associated with project A for each issue type so that all new issues bear consistent fields.

*In Profields:* Profields schemes are analogous: they are structures of metadata that group custom fields in a standardized template. While Indra uses only one scheme that applies by default to all its projects, marketplace customers of Profields can use as many as they need.

For improved simplicity, only one Profields scheme is associated with a project.

**The Project Navigator**

*In Jira:* Jira’s Issue Navigator is the home base for browsing the issues contained in an instance. Searching, filtering, and accessing detail views are central to the user experience in Jira.

*In Profields:* DEISER replicated the issue navigator for projects so that even the most gigantic project portfolio can be sorted by country, due date, technology, or any other relevant field. **With the addition of Bulk Project Operations the project navigator becomes the entrance gate to mass project administration.**
Query languages: from JQL to PQL

*In Jira:* Jira Query Language (JQL) powers advanced issue searches with a structure composed of Field, Operator, Value, and Keyword. These searches can then be turned into saved filters or subscriptions.

*In Profields:* Profields Query Language (PQL) is the project version of Jira Query Language. Thanks to a virtually identical syntax, new users can onboard it with little to none additional training, and no cognitive disruption.

THE (ORGANIC) EVOLUTION OF PROFIELDS

<table>
<thead>
<tr>
<th>PROFIELDS GROWTH</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>71,10 %</td>
</tr>
<tr>
<td>2015</td>
<td>38,69 %</td>
</tr>
<tr>
<td>2016</td>
<td>25,19 %</td>
</tr>
<tr>
<td>2017</td>
<td>74,96 %</td>
</tr>
<tr>
<td>2018</td>
<td>42,71 %</td>
</tr>
</tbody>
</table>

Profields yearly growth in sales

Since its commercial release to the marketplace, Profields has experienced a long journey, consolidating as a major cornerstone of DEISER’s portfolio and a transformation artifact for the entire company.
According to Montoya, "Profields was launched in a favorable time. Very few add-ons addressed the metadata problem, and none of them had the ambition to solve it for any customer, no matter the size and complexity of their teams. We entered into a marketplace niche and we’ve managed to fill it entirely, leaving no room for competitors". This market dexterity has proven essential in the long-term strategy of the company, particularly as more and more signs are warning that the Atlassian Marketplace is quickly turning into a red ocean. Up until 2011, most add-on developments in DEISER were driven by consultant hobbyists inspired in the customer requirements they worked with in their day jobs. There was room for experimentation, but no formal product teams to convert it. Profields’ clear value proposition allowed DEISER to consolidate an entirely self-reliant product startup that could demonstrate its value with a customer base that expanded organically. The lack of external investors, and the ability to fund the product team with the margin generated with consultancy projects was always seen as a bliss. "When you get five million euros to build a company from scratch it’s so easy to take customers for granted. Then you start selling a product nobody wants, and by the time you’ve realized your mistake you only have a handful of cash left. We’ve never had that problem", adds Montoya.
David García, DEISER's product manager, sees three overarching themes guiding the Profields roadmap: "Our global vision is to ensure the affordance of JIRA projects for enterprise governance."
That implies providing robustness and stability, but also growing in at least two different directions. First, we look for ways to empower project managers as an intermediate layer between Jira admins and users; and secondly, we absorb native Jira functionality to better replicate what customers can already do at the issue level.

In 2017, a commitment was made to centralize efforts so that new valuable features could be released every second month. "By then we had a very clear vision — Profields is a necessary supplement for any enterprise users that seek to improve the administration of their Jira projects ", states García.

FEATURE HIGHLIGHTS

Projects for the people: empowering project admins

Most companies run projects in a decentralized, loosely coupled way. For them, placing project custom fields in the sole hands of almighty Jira admins is a random restriction.

Profields 5 responded with the role of Profields Administrator, associated by default to Atlassian’s recently created Project Administrators. This change in permissions has been a boom in the usability of Profields to capture processes of all types.

Additionally, project schemes were renamed as project layouts to escape the Jira admin nomenclature and better express their 'visual template' UI.
A complete field taxonomy

Supported project field types have expanded to include essential project and portfolio management attributes, like status, priority, and resources; Jira entities, including groups; and dynamic modalities, like script fields and calculated (addition of issue fields).

Mapping the project-issue staircase

Custom fields can be mapped to project custom fields. In this case, all issues inherit the value of the project custom field, which appears in the issue navigator and can be used for all related actions, including JQL searches, filters, and subscriptions.

Project Bulk Operations

Bulk Operations are the core feature of Profields 6, and one a different vendor may have packaged as a standalone product.

In Jira, basic project operations such as deleting components and schemes or replacing project leads must be conducted manually on a single project basis - a major productivity killer, especially compared to the bulk change functionality for issues.

Profields beyond custom fields

"Expanding beyond project custom fields into other project administration gaps has been a bold move — one could argue that we’re missing focus, but the truth is we’re staying true to the idea that the product provides a complete extension
for what customers miss in Jira projects when they compare it to the administration of issues”.

This is how David García explains the apparent paradox that underlies in the product vision: customers with project governance needs include also those that don’t need custom fields. Project Bulk Operations are the first move in this direction.

**USE CASE 1**

**Globally replace project lead**

Losing talent is a major risk for any company. It’s also a painful moment for Jira administrators, especially if the person that left was the project lead in dozens of projects. Bulk Operations allow to make a global replacement based on a PQL search for all projects with that project lead.

**USE CASE 2**

**Removing clutter**

Waste accumulates in the tidiest Jira instances: when unused schemes, components, and projects must be removed manually, cleaning up can be the most tedious task of an administrator. With Bulk Operations, project deletions can for example get rid of associated schemes that are not in use in any third projects.
Interested in knowing more? Visit DEISER’s booth at the Atlassian Summit 2018 in Barcelona or request a meeting in our VIP Room!

REQUEST A MEETING
ABOUT DEISER

DEISER is an Atlassian Platinum Solution Partner Enterprise in Spain that develops Jira apps Profields and Exporter. DEISER delivers strategic solution services and premium support to help other teams achieve their potential, getting the most from Atlassian tools.

ABOUT THE AUTHOR

Jaime likes to wear different hats that often involve asking many questions about how complex organizations learn, evolve, and adapt. He holds degrees in Philosophy and Translation, as well as an MA in digital communication awarded by Georgetown University, where he was a Fulbright scholar devoted to the study of DC-based think tanks. In 2018 Jaime entered DEISER’s growing marketing team.

Jaime González-Capitel
DEISER Content Strategist