

DevOps is a reality for ALTO*

Amundi has implemented DevOps capacities on its IT platform ALTO*, for Amundi Asset Management usage, and Amundi Services clients. Enabling fast, continuous and “hassle-free” improvements of the platform for the benefit of business users and IT professionals.

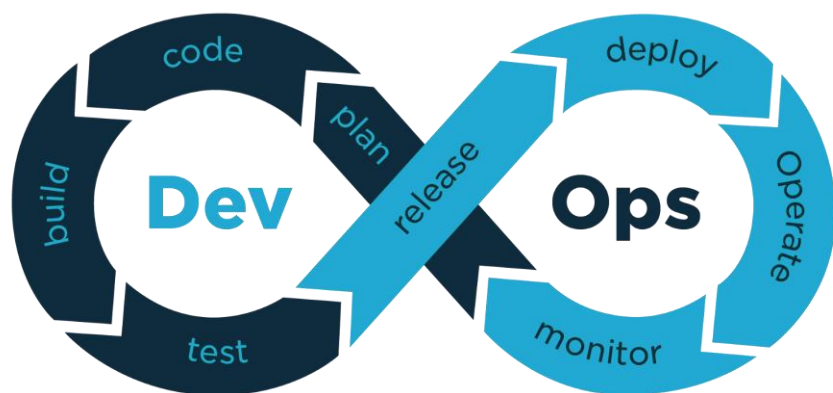
Amundi is Europe's largest asset manager in terms of assets under management and ranks among the top 10¹ globally, managing €1,527 billion² of assets across 37 countries and six main investment hubs. Amundi offers its clients a wealth of market expertise and a full range of capabilities in the active, passive and real assets investments universes. Amundi provides retail, institutional and corporate clients with innovative investment strategies and solutions tailored to their needs, targeted outcomes and risk profiles. Amundi has also 6 technology hubs with technology centers in Paris & Dublin and 4 local offices in Boston, Milan, Singapore & Tokyo.

Technology is a core priority and strategic edge with more than €100 million investment over the last 4 years to innovate and improve the Amundi's Portfolio Management System, ALTO*. In 2016, Amundi decided to create Amundi Services in charge of offering the ALTO* platform to Asset Managers and Institutional Investors.

Meanwhile, the Asset Management industry is facing many challenges. On one side, Asset Managers face declining revenue margins, as passive funds grow more popular, pressure on prices increase, active fund fees shrink, and the emergence of new boutiques sharpens competition. On the other side, costs are rising as clients demand more complex, bespoke solutions, digital tools that require investments in people and technology. Asset Managers must also shoulder the burden of far more onerous regulations. Amundi Services external clients are also looking for cutting-edge solutions that meet all these challenges. One of Amundi answers was to develop from the beginning an in-house Portfolio Management System, ALTO* for internal use and external clients. The strategy is to invest even more in technology to provide an innovative platform for portfolio managers, dealers, analysts, middle-office, risk, compliance and reporting teams.

The requirements and expectations regarding ALTO* are very high in terms of the number of investment strategies, asset classes and countries covered by Amundi. Amundi Services clients also have their own requirements that must be taken into account by the IT team. Recently, Amundi implemented an effective organization to adapt the tools as quickly as possible to meet business challenges and regulatory requirements.

Continuous delivery mindset between human collaboration, automation and standardized tools



The objective of continuous delivery is to get people working together to update the ALTO* platform with new features in a fast, sustainable and efficient way. Previously, the IT team performed releases every 2 months with new major features. This process involved approximatively 40 developers to test, update, correct and validate the content before the go live. It was often complicated, risky, accompanied by major bugs and represented significant changes for the 3 700 ALTO* users.

*Amundi Leading Technologies & Operations

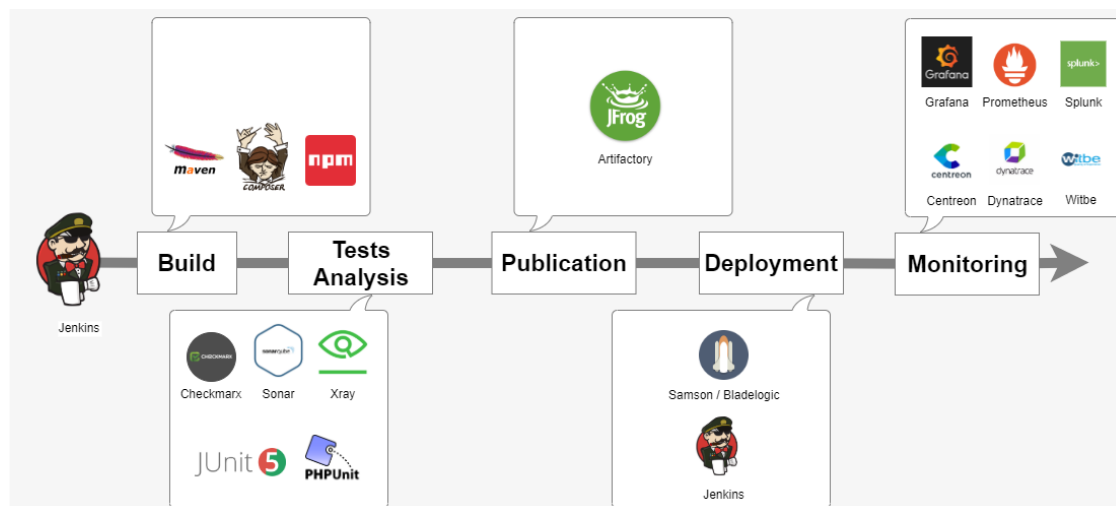
1. Source IPE “Top 400 asset managers” published in June 2019

2. Amundi figures as of March 31, 2020

Amundi organisation and continuous delivery challenges

Over the past two years a continuous delivery approach has been implemented with today around 30 releases per week. This process is possible thanks to Amundi's organization with dedicated IT teams for business lines. Strategic projects involving transversal IT teams can also be launched to meet specific needs. IT and business teams work daily side by side to adapt the ALTO* platform to their own requirements.

This agile philosophy allows the platform to adapt more quickly by building, testing, deploying and monitoring in continuous mode and cutting edge technologies are used to support this model like Sonar, Samson, Grafana... The benefits of this organization for the ALTO* users are multiple: new features are faster, better, more sustainable and all implemented on the ALTO* platform.



Now, the continuous delivery philosophy is well in place and business & IT teams are very satisfied. However, for Amundi, innovation is not just about new projects, it is also a mindset created by our process and our organisation. In order to continue the process improvement, Amundi identified two key points. The first one is to re-enforce the testing automation in order to be even more confident with the release content (code quality and non-regression testing). The second focus point is the governance and the change management to improve the communication around the release content. It is relevant to inform all ALTO* users, internal and external, about new features and changes.

ALTO* Portfolio Management System

ALTO* is Amundi's Portfolio Management System (PMS) covering the entire Asset Management value chain and providing a 360° portfolio view for all asset classes. Amundi Services offers outsourced solutions for technology & operations and makes the ALTO* platform available to external asset managers and institutional investors.

ALTO* users can, for example, analyze and manage portfolios, simulate the impact of orders, make investment decisions, perform middle office operations, measure performance, monitor exposures and risks.



**Amundi Leading Technologies & Operations*