No-code platform: The future of data repositories

Yann Mahé, Managing Director at MyScienceWork reports on how no-code application development and automation responds to existing data collection and repository limitations

With the need for digital transformation on the surge, so is the need for institutions to build applications, integrate them, update them and automate them in a quick and efficient manner that is above all, cost effective.

MyScienceWork (MSW) is a technological company based in Paris, France, specialising in the development of advanced data-driven solutions for research institutions, scientific publishers and private-sector R&D companies. Most recently MSW was listed as one of the official suppliers of the Research Outputs Repository Systems (DPS) introduced by Jisc for the UK research sector. With the introduction of Polaris OS, MyScienceWork advocates for no-code data repository solutions to accelerate and expedite innovation in a cost efficient manner.

Challenges and limitations

For several years, academic and research institutions alike have been encountering common challenges in mapping, managing and increasing visibility for their research outputs and datasets. Add to this the increasing discrepancies between solutions to store data into complex databases, solutions to harvest and ingest new documents and solutions to visualize them in a user-friendly way. In reality we are looking at a very complex, expensive yet dysfunctional research management structure.

In the new world where being together is being seriously challenged, a no-code solution bypasses physical and monetary limitations. Responding to all these challenges are at the heart of the rise of no-code/low-code solutions poised to influence a large part of the future development of platforms and databases.

Introducing No-Code

Picture a scenario where you can program as quickly as a problem or idea manifests. No-code/low-code platforms enable non-developers and developers to create applications using a visual user interface in combination with model-driven logic. In the context of institutional data repositories, this technological breakthrough translates into:

- Reduced dependency on IT teams
- Smooth transition between repository managers' needs and requirements to actualising them with greater control over the outcomes
- Agility and delivery speed
- Minimized budgetary pressure for maintenance and system developments
- A wider stakeholder contribution to the application development

A no-code data repository platform also includes:

- Tools to define metadata model
- Configuration, customization and updates
- Customizable workflows
- Tailored forms
- Easy interoperability (linking repositories to other systems & platforms)
- Users management
- Simple, graphical interface
- Customization charts

Finding Solutions

Start small, fail fast, grow and scale quickly.

Being able to evolve quickly is one of the success keys for a research institution. Big data is on the rise, and technologies are evolving faster than ever. Getting IT solutions able to adapt and respond to these changes and doing so quickly is the make or break of successful research output management.

A future that promises convenience

While open source data repositories are a thing of the past, pioneering service providers are (as is the case with disruptive technology) experiencing setbacks adapting to these challenges. More recent providers such as Invenio or Polaris OS are proving to have a more agile approach to addressing industry needs with open source repositories that allows users to create high-quality, robust and scalable repositories offering complex functions with little to no programming skills. The net effect of these platforms allows building data repositories in days or weeks, not months or years.