

## CUSTOMER STORY

# Vitam Program - French Government

# Using Scrum of Scrum to build an app to manage large volumes of data



## CUSTOMER SATISFACTION

By providing a clear vision of the upcoming releases to the 16 partners / clients from public and private sectors



## SECURED DATA

with the implementation of agile developments in Scrum of Scrum and regular iterations



## BETTER REQUEST MANAGEMENT

via the use of Tuleap as an HelpDesk and the follow-up in Scrumban

# Summary

## THE ORGANIZATION

The French government had the Ministry for Europe and Foreign Affairs, the Ministry of the Armed Forces and the Ministry of Culture in charge of securing the complete lifecycle of states archives.

## EMMANUEL LABORDE

Emmanuel Laborde is the Director of Vitam Program.



## INDUSTRY CHALLENGE

The French government is currently adopting a rather dynamic transition towards the dematerialization of administrative processes. More and more decisions concerning citizens, the State even, only exist in paper form: it was time to make a change, and mostly to support the **digital transformation** of the government, to guarantee the preservation of its information heritage. The Ministry of the Armed Forces, the Ministry for Europe and Foreign Affairs and the Ministry of Culture, each invested with a historical archiving mission, have decided to **jointly design a digital archiving solution meant to be used by several departments in order to ensure the secured archiving of data (approximately tens of billions of files to be kept for more than 20 years).**

# Choosing a flexible solution to coordinate every agile team

The main goal of the VITAM project is to **develop a back-office type digital archiving software** to ensure the **unitary and secure management of very large volumes of archives** (texts, audios, videos, images, maps, databases). It was decided to rely on **Agile methods** to ensure regular but also scalable deliveries. In this context, they needed a tool that would meet all the requirements of the project. **Tuleap was chosen because it doesn't impose a specific agile method.** Vitam teams can follow their projects in Scrum of Scrum, Scrum, Kanban or simply adapt Tuleap to their own needs.

## MEETING REQUIREMENTS

As you would've understood, Vitam is a state project with a high level of requirements:

- **Sustainability:** the app has to be running for at least 20 years.
- **High security:** the unitary management and the preservation of tens of billions elements must be absolutely secured.
- **Reusable:** the app must be reusable, used as widely as possible by public and private entities

Tuleap was selected precisely because it met all those key elements.

## RELYING ON AN AGILE AND FLEXIBLE TOOL

The Vitam management had a strong desire to develop the software application using Agile approaches. It was only logical to go for a software development tool that would support agile practices and that would be flexible enough to adapted to any specificities of their sector. Tuleap was chosen because even though it promotes and supports Agile approaches, it does not impose one in particular.

## CHOOSING OPEN SOURCE FOR THE LONG-RUN

For the French government, it was obvious their app would be an **Open Source software**. Vitam was developed as a free and redistributive software (CeCILL license), designed with bricks of other free software (Git, elastic search, etc.). The decision was motivated by the advantages of Open Source, which facilitates its reuse, its evolution, its adaptation to particular contexts if necessary, its maintenance and therefore its overall sustainability.

And because they're aware of this, it was pretty much obvious for the Vitam team to also choose a software provider that believes in and supports these values and this openness. Tuleap was **the only professional, agile and 100% open source solution** they found that met this demand.

## RELYING ON A PROFESSIONAL AND RESPONSIVE SUPPORT TEAM

« We have rich and regular discussions with the Tuleap team. It's a real strength. I appreciate the availability of the team, whether for technical support or sole accompaniment. »

« Tuleap Enterprise Gold Edition Service Level Agreement (SLA) allows us to have a platform that is always available for our teams, secure and up-to-date. »

# Developing a software solution that meets customer expectations

“ This project felt like a bet: an interdepartmental program, aimed at developing free software, in Agile, bringing together different professions and knowledge. I am now convinced that this atypical DNA is an essential factor in the success of the program. ”

| Emmanuel Laborde, Vitam Program Director

At this point, Vitam's focus was mainly on creating strong interactions with users. Regular meetings with multilateral archivists were organized by the Vitam team in order to promote the recollection of customers' needs.

**Tuleap was at the heart of Vitam's Scrum of Scrum software factory to collect, prioritize, and plan work.** It was all about turning customers' needs into User Stories and articulating the different releases for regular and consistent deliveries.

Vitam was developed with Tuleap, taking advantage of all the agile tools available in order to:

- **Involve archivists** in the development process;
- **Optimise** business value;
- **Enable adaptations**, even major ones, to take into consideration the evolution of emerging professional practices of digital archiving.

To make sure end customers are at the heart of development, business projects were carried out by the Vitam team in the form of collaborative workshops with archivists from various public entities.

## VITAM'S ELEVATOR PITCH

In Scrum, the “*elevator pitch*” is a simple sentence summarizing the issue of a project used to share product vision. Here is Vitam’s:

For services of Administration, in order to meet the challenges of over time access to digital information, Vitam offers a free archiving software solution, scalable, simple and easily interfaceable which allows the unitary and secure management of billions of objects and aims for its adoption by the greatest number of public actors.

## AGILE PERSONAS

Agile development suppose to take into consideration the needs of all stakeholders:

- Public and private **archivists** partners: they are the carriers of the functional need. They need Vitam to take charge of all archives, to ensure their sustainability and facilitate their access, in compliance with standards.
- **IT teams** in charge of production. Their goal is to make sure that Vitam can be safely integrated and operated with minimal burden.
- **Developers**. Vitam, as a back office, offers multiple APIs to facilitate the use of other applications contributing or consulting archives. Developers need them to be easy to handle, with clear concepts, and to be useable in various technological environments.

# Using Scrum of Scrum to release 3 major versions in 4 years

## A 2 LEVELS ORGANIZATION

In 5 years, 86 people have worked in the project team, with 1 to 4 teams in parallel. Vitam teams worked in Scrum of Scrum, one of the methods to achieve **agility at scale**.



Two levels of hierarchy for agile teams at Vitam

The project was structured around **two levels**:

- **A global level of management** ensuring the link with the stakeholders;
- One level per **Scrum team**.

The organization relied on 4 transverse support entities:

- The technical Board
- The functional Board
- The Software Factory team
- The Integrator

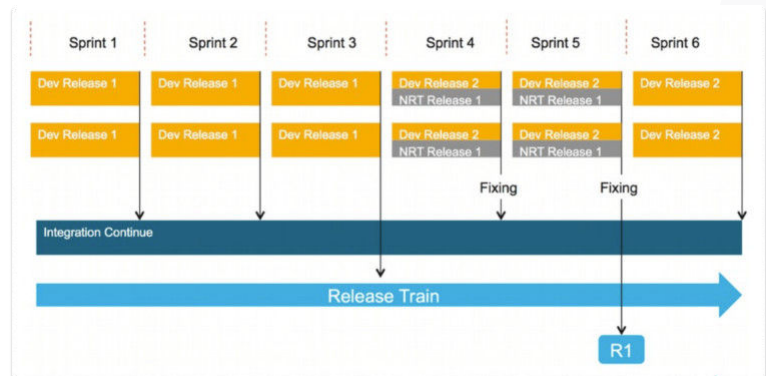
More precisely:

- **Management team:** they decide what will be up in next releases and are responsible for making sure to keep in touch with external contacts. They ensure the overall reporting of the project, measure the overall velocity, consolidate the global backlog. They decide on the creation of any new Feature Team, validate the overall DOD (Definition of Done) of the project. Furthermore, they're in charge of organizing the Scrum of Scrum approach, the global sprint reviews as well as the retrospectives;
- **Stakeholders:** they propose and validate User Stories during functional tests via the Management team;
- **Feature Team:** they're responsible for producing software bricks on one or more business parts. The team is autonomous and multi-skilled;
- **Component Team:** they're responsible for producing cross-functional software bricks for the Features Teams services. The creation of a Component Team is necessary either when a set of features concerns too many User Stories, or when a set of features becomes too technical, making it difficult to create a user view from it;
- **Technical Board:** they guarantee the technical consistency of the project and validate the technical architecture choices as well as the quality of the code;
- **Integrator:** they test and guarantee the operability and performance of the software solution.
- **Software Factory team:** they maintain the software factory which ensures the management of the release train, the management of branches and version labels;

# DEVELOPMENT CYCLE OF THE RELEASE TRAIN

The development cycle of VITAM was organized as follows:

- 3 weeks for sprints (iteration),
- 3 to 4 months, i.e. 5 sprints per intermediate version (Release),
- 1 year for major versions.



Vitam Program Scrum Development Cycle

Out of the 5 sprints planned to make one Release, there were:

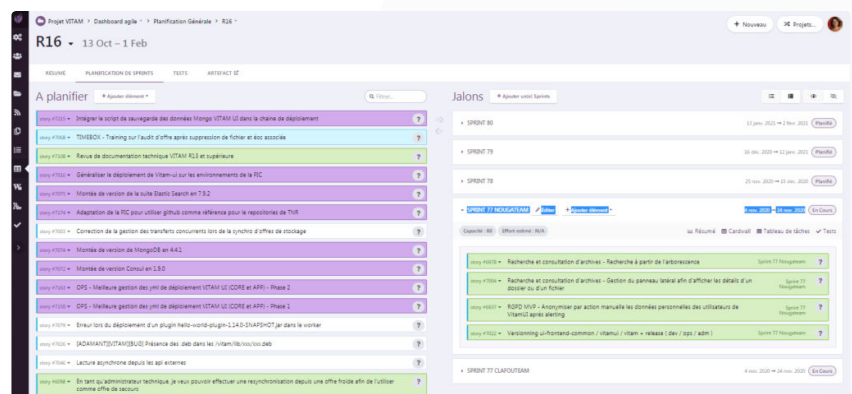
- 3 sprints completely dedicated to the production of the release; at the end of the third sprint, the content of the release is frozen ;
- the next two sprints were dedicated 1) to non-regression, overall consistency, performance, operability and fixings tests as a result and 2) to production of the next release, in the remaining time available.

Tuleap made it possible to orchestrate this organization and the planning of releases.

With Tuleap, development teams were able to:

- **Collect the needs** of future users (see Agile Personas above);
- Prioritize them to form an organized **Product Backlog**;
- Turn those needs into **User Stories**;
- **Plan User Stories** and **break them down** into functional or technical development tasks;
- **Link tasks to source code** replicated in Tuleap's Git version manager.

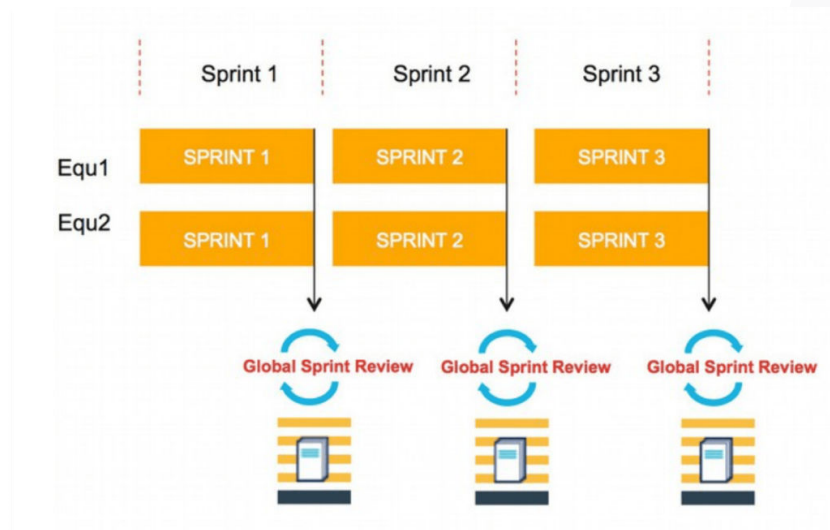
With Tuleap, **everyone had an overview of what was up for next releases**. Lead ministries and partners could thus base themselves on the deliverables of the sprints to carry out their own developments. These regular deliveries also allowed them to perform tests that contribute to the quality of the deliveries and deliverables.



Planning of Vitam release n° 16 in Tuleap Scrum Planning

## AUTONOMOUS SCRUM TEAMS

For each sprint, **teams were autonomous** and piloted their own activities. At the start of each sprint, each team had their own Sprint Backlog from the iteration backlog, and at the end of each sprint, a sprint review was carried out locally by teams.



Articulation of Sprints and the Global Review

Then a transversal sprint review was organized by Project Management, bringing together the PO / SMs of each team, in order to consolidate the project backlog and take the transversal decisions that affect all the teams.

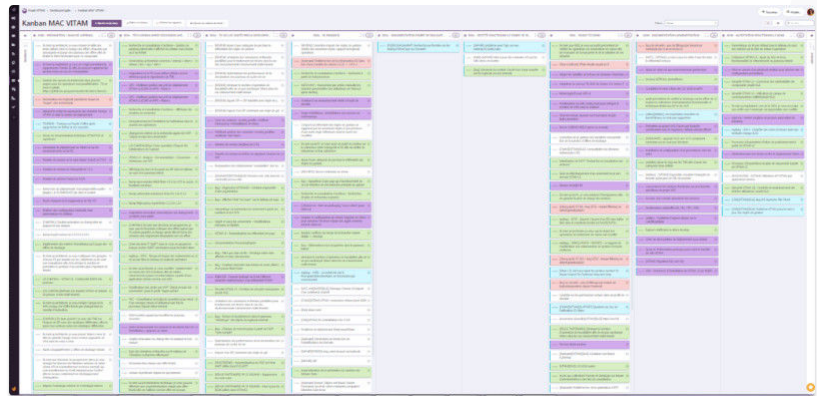
## Optimizing maintenance management with Scrumban and traceability

Once the major part of the app had been delivered, the Vitam project entered a new phase of progressive maintenance. It consisted of improving the product, both at the technical level (performance, robustness, technological updates) and at the functional level. **The various Vitam partners express their requests for development through Tuleap, which here acts as a ticketing platform or HelpDesk.** The requests are then analyzed and taken care of by the maintenance team.

**For the follow-up of change requests, the Vitam team has chosen Scrumban**, an agile method which allows benefiting from iterations of Scrum and the concept of flow from Kanban. To summarize, unlike Scrum, Scrumban seeks to manage pull flow and no longer push flow. To put it simply, Vitam teams will no longer plan their work for a full sprint but will prioritize activities as and when required.

Tuleap allows the Vitam team to:

- **Simplify project monitoring** by relying on visual tools (Kanban board);
- **Better manage the incoming flow** of tickets;
- **Optimize the workflow** and the distribution of tasks.



Kanban allowing to follow the requests of evolution from Vitam customers

But how do you manage to understand the history of a development when you are doing maintenance? It's the traceability that makes it happen or not. Traceability means tracing the lifecycle of a piece of code, to understand its origin, related incidents, the customer's initial need. With Tuleap, **the traceability between a user story and a source code is done automatically, easily; it saves time for maintenance teams who return to work.**

## Results: full traceability and better customer satisfaction

The challenge was to develop a software solution that could be used by several departments to ensure secure data archiving. Tuleap was able to meet the challenge, allowing the Vitam Program teams to benefit from:

- **Effectiveness of the implementation of Scrum of Scrum with Tuleap;**
- A **reusable and reused solution**, coordinated with the goals of the Program;
- **Integration of contributions** to the software solution code;
- **Success of the Vitam software solution with customers** now being adopted by public organizations and private companies;
- Continuous evolution of the solution with an **optimized evolutionary maintenance management.**



[www.tuleap.org](http://www.tuleap.org)