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Collaborative suites

Use value and alternatives

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Editorial

Electronic messaging, which was the alpha and omega of corporate communication for over thirty years, has seen its use stagnate and its image tarnished in recent years. It has gone from being an effective aid to a source of frustration due to the need to devote more and more time and effort to managing its growing flows of messages and decreasing relevance: the number of emails continues to increase while their value decreases. This has led to the advent of new tools for collaboration and exchange, offering an alternative user experience, taking advantage of other communication vectors derived from the private sphere: real-time dialogue, voice, image, video, co-editing, task sharing, mobility, etc.

Already underway well before the health crisis, we are seeing a major change in the way companies work, with teams physically dispersed over different sites, countries or time zones, and the disorganisation of organisations. Performance now finds its source in collective intelligence, shared expertise, transversality, the ubiquity of professional activity and porosity with private life.

These developments now make collaborative tools critical, moving them from the status of *tools* or *resources* to that of applications with recognised use value. The investment capacity of hyperscalers quickly transformed the supply landscape into a duopoly. However, the growth in the functional scopes of these tools, the need for deployment flexibility, users' maturity, their diversity of profiles and the high expectations in terms of user experience, take-up and autonomy vis-à-vis major suppliers are all reasons that encourage companies to take back control of their collaborative suites.

Cigref's members wanted to examine the potential existence of a third way, whether through the emergence of a best of breed, the advantages of which have been widely demonstrated. The working group's research shows that while the migration and deployment aspects are significant, there is a credible alternative offer covering a broad collaborative functional spectrum, but which requires designing a system of interoperable modules. Depending on its culture and operating methods, each company will be able to choose solutions from among the proposals available on a dynamic European market.

Stéphane ROUSSEAU - Director of IT at EIFFAGE, Vice-President of Cigref, coordinator of the "Collaborative Suites" working group.

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- **Renaud de la Croix,** Managing Director, Intelligent Engineering Services lead Gallia at **Accenture Technology**
- **Laurent Bolopion**, Global Head of Digital Workplace Services, **Société Générale**
- **Kamel Djerbi**, Head of the Digital Working Environment Department, **Ministry of the Ecological and Solidarity Transition**
- **Sophie Bouteiller**, IT Governance Officer, and **Kévin Faussadier**, Head of IT Support France at **SCOR**
- **Philippe Benoît**, Director of the SATAWAD programme
- **Yannick de Kerhor**, Head of Strategy & Transactions at EY

This document was written by Flora FISCHER, Mission Director at Cigref, with the contribution of the work's managers and participants.

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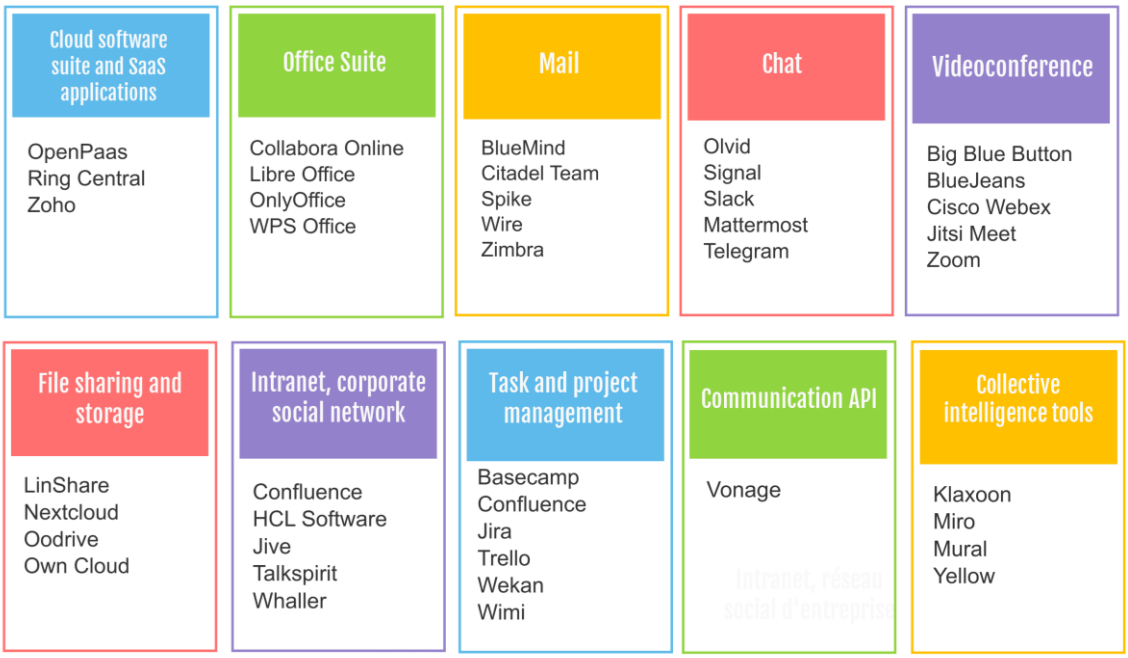
Executive Summary

The world market for software licences and digital services is currently concentrated in the hands of a few international, mainly American, major players. Large organisations are less and less willing to bear the costs of packaged solutions, which are not necessarily adapted to actual needs and which make them dependent on a particular supplier. They are seeking to regain a certain strategic autonomy and want to ensure the security and resilience of their activities while making the most of innovation.

In a context of a health crisis where adopting collaborative tools has been central, many problems have been exacerbated. The working environment must be multi-device, user-friendly, interoperable and secure.

This report deals with the use value of collaborative suites and the conditions for the emergence of alternatives (open source as well as proprietary) to the Microsoft O365 and Google Workspace duopoly. It shows the key points of dependency on these major suppliers, and possible strategies for developing modular approaches that allow for the integration of certain open source components into collaborative suites. The working group developed a typology of alternatives to the main components of collaborative suites:



Introduction

This document is a continuation of the work carried out by Cigref on Open source: an alternative to the major suppliers, and The 5-year evolution of the working environment. It is offered as a study the landscape of collaborative suites, based on their use values, and to study the conditions for the emergence of alternative solutions.

Twelve years ago, Cigref produced a report on open source technology, but the subject changes rapidly. In 2017, a working group wanted to take a new look at the following questions: how can companies adopt open source a little bit faster, what choices are available, how can we organise open source governance, what are the opportunities, and what are the risks?

The following year, in 2018, a workgroup extended this reflection and addressed ways of managing open source layers and building them into business applications.

The most transversal use case covers the work environment and collaborative tools. This is why Cigref has chosen to deal with this subject for the 2019/2020 financial year. Faced with the duopoly of Google Workspace (formerly GSuite) and Office 365, what room for manoeuvre do organisations have to maintain a minimum of independence, particularly as concerns sensitive applications? Can a third way emerge through co-development and open source technology? What are the "right uses" (and actual needs) for choosing the right solutions?

This is why we have chosen to focus on the **"use value"** of collaborative suites, which allows us to determine whether **the product or service meets users' needs**.

This report provides the keys to:

- Identifying the various enterprise collaboration tools for which there are alternatives and to analyse their use value.
- Assessing the conditions for the emergence of alternatives to monopoly collaborative software suites (Office 365/Google Workspace) and knowing how to implement these alternatives (change management, the cultural/technical/organisational aspects, etc.).
- Determining the criteria for adopting these alternative systems (reliability, security, compliance, interoperability, etc.).

1. Collaborative suites: scope and use value

1.1. Scope and challenges

The collaborative suite is seen as an interdependent set of tools allowing omnichannel cross-functionality in exchanges and giving each employee a single access point to all the features. Since this working group's purpose is to identify the conditions for the emergence of alternatives, let's start by asking ourselves about the components of a collaborative suite where there may be an alternative. They are presented below in the columns "Office and communication tools" and "Collaborative spaces". The "Hardware scope" column sets out the media and peripherals to be taken into account in their capacity for interoperability.

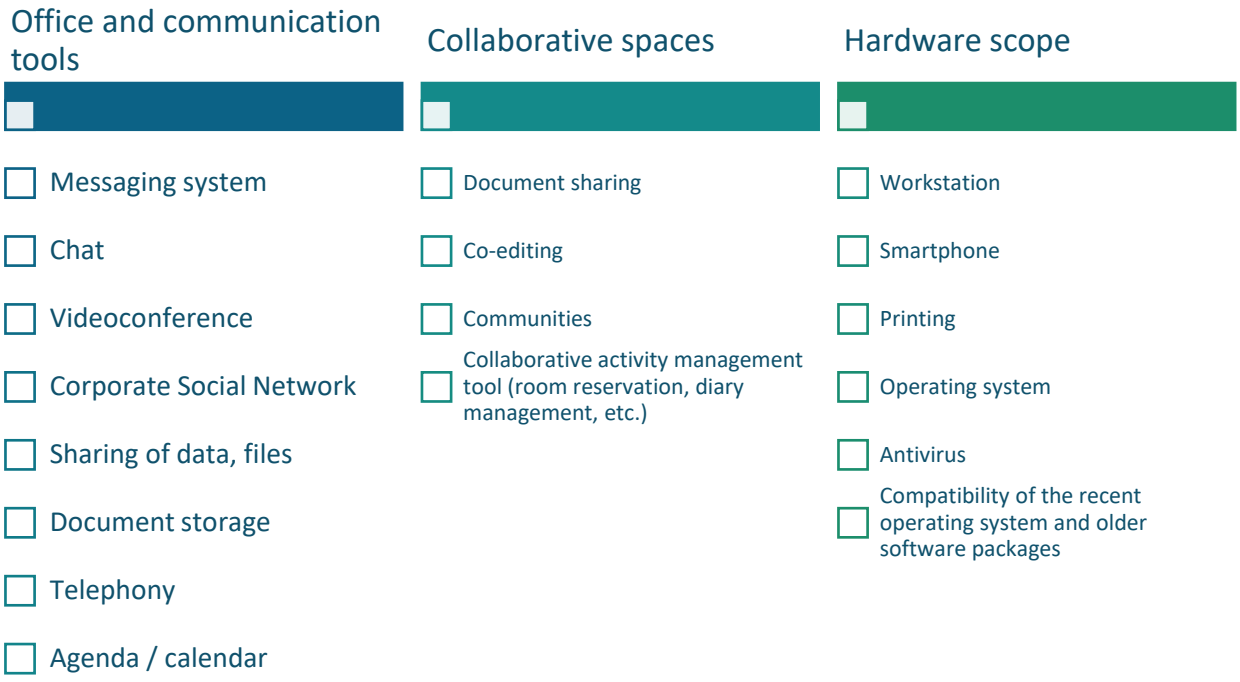


Figure 1: Components eligible for alternatives

Deploying work environments poses six main challenges for companies:

- Modernising in-house IT to support the digital workplace,
- Increasing the organisation's attractiveness: the working environment is increasingly becoming a differentiating element,
- Improving employee culture and skills,
- Ensuring profitability (in terms of Total Cost of Ownership),
- Facilitating collaborative work inside and outside the company,

- Being able to scale up automation and artificial intelligence processes, as employees can expect a custom collaborative experience.

Finally, user experience and change management are key factors in the successful adoption of collaborative solutions.

Accenture's feedback

The three pillars of the working environment

The experience around the working environment is structured around three pillars:

- Re-imagining the culture and experience of employees: the solutions implemented in the company must provide the same level of quality as those deployed for customers.
- Supporting new working methods (sharing, real-time collaboration, etc.) by optimising operations as much as possible.
- Modernising the company.

Renaud de la Croix, *Managing Director, Intelligent Engineering Services lead Gallia at* ***Accenture Technology***

1.2. Expected use value

Almost three quarters of the companies participating in the working group estimate that the use rate of the features in their collaborative suites does not exceed 50%.

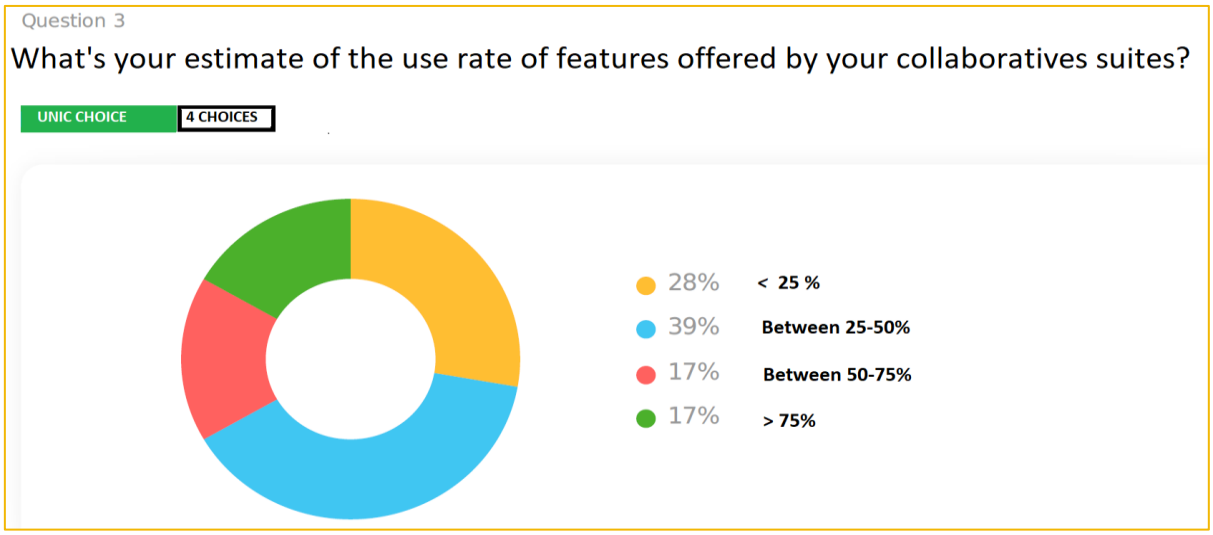


Figure 2. Estimate of the use of collaborative suite features

Moreover, the collaborative suites use value is not derived from the variety of the applications on offer, but their ability to meet needs. For most organisations, the expected use value is more in the following areas:

- **Security**: the data and information that circulates on sharing and exchange applications reflect the nature of the organisations' activities, which are more or less sensitive. The security of the data that is stored and exchanged is therefore a crucial point in adopting collaborative suites, and this concerns both the hardware and the network. Security must be guaranteed remotely and smoothly (security patches must be easy to deploy) and offer control over identities and data access. Finally, the security issue also lies in the watertight separation between professional and personal activities, which are sometimes mixed together depending on the applications and devices used.
- **Transversality and continuity**: the question of the messaging system's integration, for example between IT and the business lines, is important. There is still a gap between the actual uses of information sharing, which sometimes resembles "Shadow IT", and the use of collaborative spaces deployed by the organisation. Openness to the company's external ecosystem is also an asset. Expectations around collaborative suites are that they should be accessible from any device and facilitate the organisation and sharing of information.
- **User experience and ergonomics**: collaborative suites must be intuitive to use. User experience is far more important than one might imagine: it matters more than functionality and is essential in the user adoption phase. The more complicated a solution is to use, the less sharing there will be. And, paradoxically, the easier a solution is to use, the more complicated it is to make it user friendly. Rich features can make using them less accessible.
- **Interoperability**: the working environment must be integrated by ensuring consistency not only with what already exists but also by taking into account an information system that is bound to evolve. Interoperability can be conceived on two levels:
    - Firstly, within the working environment. The various components such as messaging, office automation, telephony, etc. must be able to be integrated regardless of the device used (PC, telephone, tablets, etc.). Staff on the go must be able to access the same features as if they were on-site.
    - Secondly, interoperability plays out at the company level: work environments must be able to integrate with the legacy IT, whose lifecycles are long, and work smoothly the existing system, particularly in the business units.
- **Saving time** is also an important criterion: collaborative suites must bring together flexibility, transversality and speed in the exchange and sharing of information, the organisation and planning of meetings, etc.

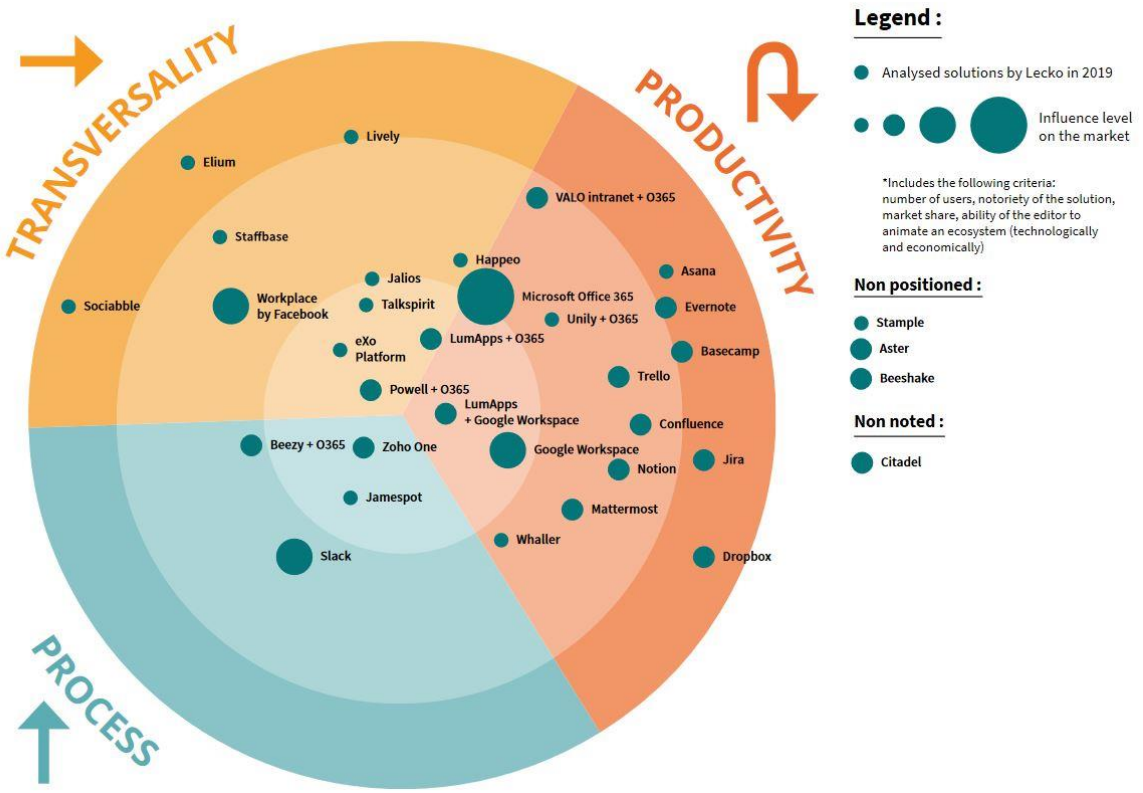
- **Freedom of choice of options and features:** users are calling on publishers to give them more flexibility in the choice of features and options integrated into collaborative suites. The range of features should adapt to meet employees' actual needs. Unused features lead to hidden and uncontrolled costs.
- **Agility**: From the moment they are designed, work environment solutions must be able to adapt to changes in "alternative" ecosystems.

Finally, the **productivity of collaborative tools** is a major issue, particularly in the current period of health crisis where remote working has become much more widespread for eligible populations. In this exceptional context, users have many strong expectations, and the tools must be near-instant to learn, use, and be productive. In particular, the use value of these tools must respond to the following requirements:

- Organise your team's activities, conversing continuously, coordinating and steering actions
- Co-produce content, exchanging in real time
- Produce, store and organise documents
- Manage your time efficiently
- Quick access to all useful information

To get a clearer view of the use value of the applications that make up the working environment, here is an analysis of the suite market by Lecko[1] according to transversality, productivity and processes:

[1] Lecko " State of the art of internal transformation of organizations " 2021 edition, p. 157



©Lecko " Market analysis " (2021)[2]

1.3. Use value of Office 365 and Google Workspace

More or less, **the feature coverage is the same for O365 and Google Workspace**. The difference between the two is rather in the way the functionality is rendered. The main distinguishing feature is expressed not so much in terms of technology as in terms of **conception, approaches, design and philosophy**.

1.3.1. Office 365

The benefits in terms of the use value of O365 are mainly expressed, for most participants, in its functionality and user experience. From a standpoint of familiarisation, autonomy and flexibility, users point to a real difference compared to old environments. The primary objective for most organisations is to enable any employee to be able to work remotely at any time, wherever they may be. Technically, the migration makes it possible to have only managed servers managed by Microsoft. The collaborative working is not perfect according to some, but it is gradually improving. The switchovers of messaging

[2] Lecko " State of the art of internal transformation of organizations " 2021 edition, p. 157

services and Intunes were considered to be transparent for users. Teams in particular allows you to add third-party applications, both paid and free, within the same interface. Some applications already in use within the company (such as Klaxoon for example) can be integrated very easily.

But Office 365 is constantly changing, imposing new features on users. User support is fundamental in the migration and adoption of a changing suite, but the feedback about Microsoft's support has been mixed.

SCOR's feedback

Some observations on migrating to O365

Microsoft Office 365 is a project that concerns the whole company. The transition from an on-premise environment to a cloud computing environment raises questions of security and compliance (particularly with regard to GDPR). This must involve at least the legal department, the DPO, HR and Communication, in addition to the IT department.
At SCOR, becoming familiar with the O365 suite was fairly spontaneous, but there were still difficulties before the health crisis in getting all the tools adopted, in particular the meeting tools (notably Teams instead of Skype), chat, and the use of the shared document functionality. Here is what we have found today:

- Covid-19 has helped to speed user take-up of the suite, and a significant amount of communication, pedagogical and support work has been carried out with users to facilitate their daily life in a remote working situation.
- Office 365 has also made it possible to standardise business practices (...) in terms of file sharing and to meet the requirements of the GDPR by imposing SharePoint and OneDrive as the standard file sharing tools within the Group, both internally and with external stakeholders.
- MS Teams Live Event and Teams have been used extensively for videoconferences.
- The use of Yammer, which was already the Group's CSN, has slightly increased.

Sophie Bouteiller, IT Governance Officer, SCOR

1.3.2. Google Workspace

Google Workspace is no longer considered today as an outsider on the market but as a real competitor. Indeed, more and more companies are looking at migrating to a 100% Google environment. **The key factors in Google's attractiveness are:**

- The ability to attract new talent
- Diversifying suppliers
- The financial motivation around ROI and IT modernisation
- Security

Switching to Google is now seen as an alternative to Microsoft. It involves real change management as well as work to be carried out to provide services similar to the old solution (printing, storage, identification, etc.).

Microsoft is pushing companies towards Azure AD, so there is no more on-premise investment possible. For companies that have migrated to Google, the choice is not so much based on economic criteria as on security, particularly for all messaging services. These companies have managed to separate themselves from all the ADs (active directories) by going exclusively through Google SaaS.

VEOLIA's feedback

Adopting GSuite with the SATAWAD programme

SATAWAD (Secure at Anytime, from Anywhere, and from Any Device) aims to provide all the Group's connected employees with a shared "digital working environment", which Veolia wants to be modern, agile and attractive.

Three fundamental principles serve as milestones of this project initiated in 2013:

1/ **The adoption of a single collaborative platform**, based on GSuite, by all employees worldwide. What is important is that usage becomes collaborative more than using the tool in itself.

2/ **Transforming all applications to a web format**: the objective is to give employees the same experience as in their personal life (secure access to their bank information from anywhere and from any device). The applications must be device-agnostic by being accessible via a browser. In this way, the dependencies and obsolescence of the information system are managed.

3/ **The Chromebook** completes this process: ChromeOS is currently the best on the market. It is the most efficient and the most secure way to access an information system that is entirely on the web. Moreover, it is easy to manage for the IT department because it is operated through a SaaS platform.

The SATAWAD environment allows us to respond to the "4C" issues: collaboration, cybersecurity, carbon footprint and cost. The mobility that the approach brings to Veolia employees enriches these four dimensions.

Philippe Benoît, Director of the SATAWAD programme

While these two hegemonic suites provide a base of diversified and secure collaborative functionalities, **the question of costs, negotiation possibilities and dependency are nevertheless considered as strategic obstacles**. In addition, with the packaging of their offers, publishers impose unwanted and, above all, unnecessary subsidiary features on all users. These unused features induce hidden and uncontrolled costs that are linked to migration and constant transformation.

This is why many organisations are asking themselves whether they want to give themselves some distance by moving more towards open source suites or upper layers to be integrated into more modular collaborative suites that suit business units' needs. According to Renaud de la Croix, Managing Director, Intelligent Engineering Services lead Gallia at Accenture Technology, heard by the working group participants, we are at a turning point in the evolution of the collaborative solutions market, and it is the right time to change or at least try to hybridise the work environment, taking into account trends in the following indicators:

- **Corporate culture** is evolving towards an increasingly agile world which requires maximum interactivity and fluidity,
- **Innovative services** need interaction, sharing, and, especially, real-time sharing,
- **Human capital**: the employee experience must be even better than the one offered to customers, **IT must be modernised to serve the employee experience**. The move to the cloud and the modernisation of the computer fleet are meant to serve customers, but they must also serve employees,
- **AI**, which is becoming a part of HR management and which provides a custom experience.

2. Criteria for the emergence of alternative collaborative suites

By "alternative" solution we mean any other solution, be it "open source" or "non-open", but with a preference for open source that generates significant cultural adherence.

Access to open source solutions for the workstation is a recurring demand from companies, but they are faced with two challenges. On the one hand, there are few standards for the modules that make up these solutions, and on the other hand, we must remain vigilant because, since the work tools are used daily, any change can have a significant impact on the comfort and culture of employees.

2.1. Is a third way possible?

Even if a complete migration seems illusory, you should be aware of the possible alternatives. **There are more or less complete open source or non-open suites** for those who want to try the experience:

1. *Open source* collaboration suites
2. Co-editing suites (real-time information sharing)
3. Solutions adapted to new physical work environments
4. Solutions for the mobile work environment
5. Communication tools, particularly in real time

To move towards alternatives, we need to look at **the state of the market in terms of maturity**. O365 and Google Workspace are the only players that cover all the building blocks of a collaborative suite. Beyond that, Microsoft is the only one working on infrastructures adapted to businesses, which is not as prevalent at Google or any other player in the market. However, despite the fact that functional coverage is largely sufficient among both players, organisations are increasingly moving towards upper layers or alternative parallel applications, even if they are less mature and require development.

2.1.1. Open source collaborative suites?

Some organisations are culturally very much oriented towards "open source software". They first look at user needs and push fairly simple functions such as file sharing ("Collabora", "Next cloud"), with an approach of integrating different products rather than a single suite. This obviously has an internal cost. It requires dedicated teams but, compared to the constraints of other single solutions, the added value is perceptible in terms of cost, security, palatability and organisational culture.

For example, one organisation is in the process of industrialising the Wire solution with the possibility of integrating it into the business lines.

EY's feedback

Implementing an open source secure messaging system based on Wire

For reasons of sovereignty and security of internal exchanges and, especially, for the confidentiality of our exchanges with certain customers, EY has chosen to develop an additional messaging system parallel to O365 based on the European Wire technology and hosted by EY on a private cloud in France. Wire was the most satisfying and mature solution. It has the following advantages:

- It is European
- It is an open source solution
- It has decentralised encryption keys in the devices that communicate with each other, not in the central servers so, by design, the central servers only have encrypted information.
- It allows full encryption of voice, images and attachments. Everything is taken into account.

However, meta-data encryption has been added. An invitation system has also been created, allowing employees to invite outside people for a certain period of time.

The advantages:

- The primary objective is to create differentiation on the theme of securing exchanges.
- To be a back-up, for any organisation, in case of a cyber crisis for example.

Yannick de Kerhor, Head of Strategy & Transactions at EY

Others are looking at the possibility of promoting alternatives for users who only need basic office or collaborative functions in their business while at the same time studying the possibility of interacting (or, on the contrary, cutting off the possibilities of interaction if interoperability is impossible) with the segments of the population that exclusively use the Microsoft environment.

Some references are interesting to study, such as the *Socle Interministériel des Logiciels Libres* (Interministerial Open Source Software Base) which is updated every year[3]. Co-built by communities of government IT staff, operators and local authorities, this base is the reference catalogue of government-recommended open source software to meet the needs of French administrations.

[3] It is publicly accessible via this website: https://sill.etalab.gouv.fr/fr/software

Presented as a table, it allows you to quickly identify the recommended software and version thanks to a classification by functionality or by use case. It can be copied and distributed without restriction.

Société Générale's feedback

The company's open source strategy

The promotion of the *open source* philosophy within Société Générale is based on three key words: ***Use, Attract, Contribute***. The objective is to apply the open source strategy to the entire digital workplace.

- ***Use***: take advantage of the best standards on the market and challenge traditional suppliers. Open source also requires the ability to reduce development time to meet user needs. The objective is to take advantage of the best standards on the market and challenge traditional suppliers.
- ***Attract***: move from systematic use of IT providers to specialised and talented in-house resources. The aim is to strengthen the employer brand and attract the best talent.
- ***Contribute***: use open source software to build a community and network. This enables employees to be engaged and to benefit from the expertise of open source communities, encouraging the emergence of disruptive solutions. The aim is to benefit from suitable and secure technologies.

Laurent Bolopion, Global Head of Digital Workplace Services, Société Générale

2.1.2. Towards modular approaches

But for most companies, massive deployment of open source collaborative suites is not an option. A modular approach seems more realistic and relevant.

Indeed, even if the main core of the work environment is under O365, some feedback shows there can be a modular approach strategy somewhere **between O365 and open source**. By searching in specific niche markets for relevant open source solutions adapted to their needs, these companies manage to free themselves, for certain specific and sometimes sensitive areas, from dependence on major suppliers.

Société Générale's feedback

Promote possible alternatives via the company's application store

Most of the paid software in the employees' application fleet was examined to find its open source equivalent. The alternatives identified were then packaged and put into the company's application store: this allowed each employee to go into the Société Générale store and install the open source equivalent of an application if they wished. This has been very successful, especially for Libre Office and Gimp. There has been awareness raising but no significant campaign. The aim of this approach

is to show that if employees download these alternatives, it means that there is an interest in further deploying these open source offers, even if this will never be iso-functional.

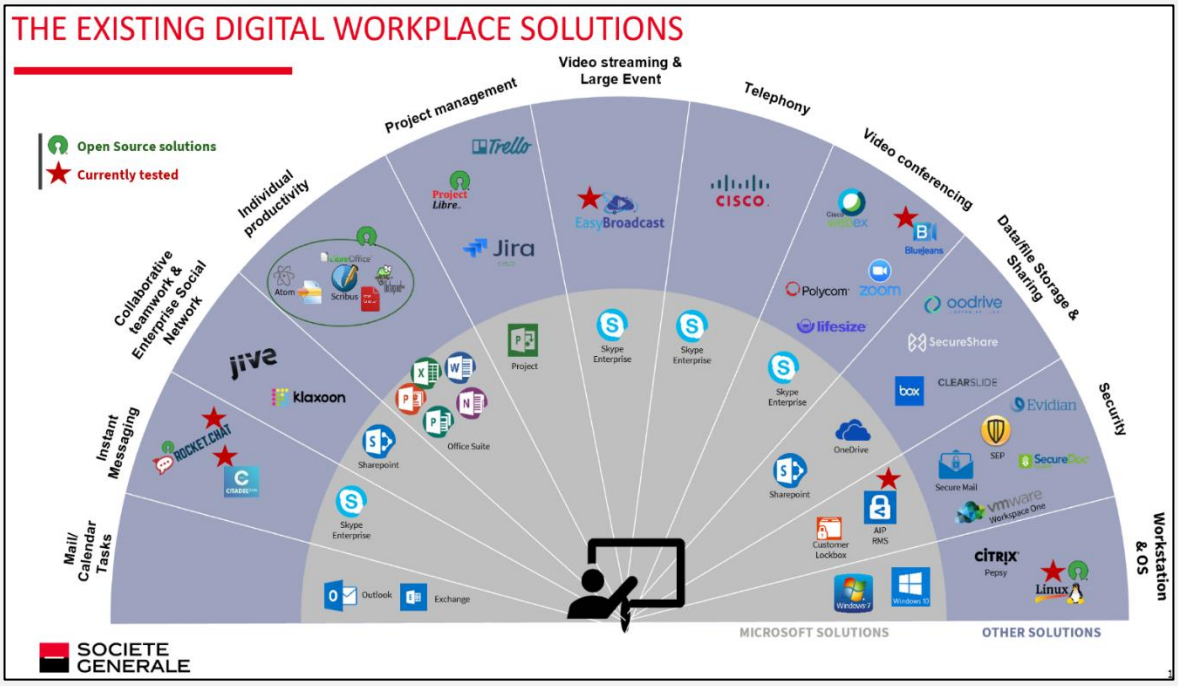


Figure 3. Existing solutions (MS and others) for the digital work environment - Société Générale

Laurent Bolopion, Global Head of Digital Workplace Services, Société Générale

2.2. Advantages and disadvantages

2.2.1. Advantages

There are many arguments in favour of adopting open source solutions or collaborative modules. They are based on the following elements:

- HR and technical expertise: integrating skills by welcoming the best contributors.
- Control of changes: the organisation retains the choice and decision to remove or add functionalities.
- Security: using open source software allows you to control the hosting environment (whether on internal data centres or in the public cloud, etc.).
- The interoperability of open source software: software such as Rocket.chat and Jitsi allow for good interoperability, for example.
- Participation and access to open source communities. This leads to a certain pride and motivation among the employees.

- The modularity of open source solutions, which allows new modules to be integrated when the need arises.
- The administrative simplicity in license management.
- The full cost, much more interesting than the solutions of the major publishers.
- Compliance with standards.
- Independence from major suppliers: the use of open source software allows us to avoid three risks identified in depending on Microsoft in the digital workplace, which are:
    - Financial risk: negotiating power is low
    - Strategic risk: there is a strong dependence on the Microsoft roadmap
    - The security risk: all data is collected by Microsoft

2.2.2. Points of vigilance related to open source

Proprietary solutions have offers that are more attractive, better integrated, and better sold to users, and the weight of the duopoly does not allow open source solutions to be as attractive or visible on the market. Moreover, Martec's law,[4] which highlights the divergence between the speed of technological development and the (lesser) speed of transformation of human organisations, **gives food for thought on the crucial aspect of user acclimatisation,** and this is all the more true with regard to using open source suites. They also lag behind the functionalities offered by the large suites, particularly in:

- Machine translation
- Automatic and intelligent naming and classification of documents
- Knowledge sharing and management
- The quality of the internal search engine
- The quality of the various correctors
- Automatic graph presentation
- Interoperability, see the merging of office automation tools

There may be some difficulty in bringing together two types of technologies that do not evolve at the same pace; however, the adaptation time of human organisations is perhaps more in line with the development time of open source technologies. There is therefore a cultural interest in adopting open source software despite the implementation difficulties that may be encountered.

[4] Proposed by Scott Brinker, Martec's law states that technologies evolve exponentially while organisations evolve logarithmically.

A successful **cultural adoption** requires strong support for users with suitable change management. But sometimes the solutions are not user friendly, and the "gap" between the tools that employees use in their private lives and those they use in their professional lives can be problematic and make it more difficult for them to acclimatise to open source software.

The second condition to successfully meeting the open source challenge is the need for **strong skills** internally to integrate the solutions. Moreover, according to Renaud de la Croix, application performance, scalability, the issue of integration by API, security, data storage and identity management require a **complex technical architecture** and related skills. You should bear in mind that complexity slows down user adoption because it requires mastery of the application and the upper layer.

Two other challenges arise after the fact:

- Avoid covering existing application areas so as to not harm ROI.
- Ensuring data security in the cloud

Feedback from the Ministry of the Ecological and Solidarity Transition

Building a 100% open source collaborative suite: MEL

Since 2010, the Ministries have been developing a strategy for the widespread and proactive use of open source software. Acclimatisation is now strong. Within this framework, the ministries have developed a collaborative suite called "Mél":

Stages of construction:

- 2005: switched from locally managed Exchange servers to a centralised solution based on open source software, called "Mélanie 2".
- 2014: added collaborative functions allowing for surveys such as Doodle, shared spreadsheets, etherpad, ethercalc, for example.
- 2019: UX Design work to improve user friendliness, the possibility of changing names and logos to take into account the interministerial aspect.

The Mél collaborative suite can be accessed in three ways:

- A "client access" installed on the workstation.
- A "Webmel" portal supported by the RoundCube solution (which provides access to the shared calendar, online surveys, co-edition, etc.) accessible from the internet and intranet.
- Synchronisation on tablet and mobile.

The possibilities offered by the collaborative suite:

- File sharing and online editing with Nextcloud, Collabora (online libre office).
- Individual modules: shared calendars, directory, task management, project management.
- Portal allowing the user to access its resources via an online office suite.
- Discussions, instant messaging via Rocket.chat.

> Mèl's ambition is to offer a collaborative work service adapted to each user, giving them access to the digital resources they need, depending on the structure to which they are attached and their skills. This allows us to make something bespoke rather than "ready to wear".
>
> One of the undisputed advantages of open source software is the cost, but also the independence from suppliers.
>
> At present, modules are being pooled at the interministerial level, helping us to reach 500,000 - 600,000 users on open source software modules, making it possible to secure the strategy and ensure the sustainability of open source software.
>
> **Kamel Djerbi, Head of the Digital Working Environment Department, MTES**

2.3. Identified alternatives

Over the course of the meetings, participants in the working group shared the tools they were exploring or deploying with the aim of propelling increasingly modular approaches in work environments:

Figure 4. Collaborative suite: alternatives identified by component

Dependence on large American suppliers was particularly felt during the lockdown period linked to the Sars-Cov-2 health crisis in March 2020. The working group therefore wished to explore the findings and studies for the future of the working environment in the face of remote work or hybrid work models (mixing in-person, remote and mobile working).

3. The work environment during lockdown

3.1. Findings and questions

The change in the organisation of work due to the lockdown has generated problems of varying degrees of severity depending on the organisation, but all organisations are seeing benefits, which will also have a lasting impact on the organisation of work and collaborative working methods.

Securing remote access, **VPN deployment**, and **bandwidth** control were among the top priorities at the beginning of the lockdown. The **deployment of collaborative tools**, the associated **communication**, particularly with those who were not initially equipped, and the **supporting employees** also occupied the IT teams for several weeks.

The situation of massive and forced remote working is an **ideal environment for the adoption of collaboration tools** that were previously more complicated to get accepted and deployed. **This context has positively changed organisational cultures, which are sometimes very distrustful of remote work**.

The vast majority of participants have the O365 suite, but the deployment of Teams had not always been carried out prior to lockdown, with some preferring Skype or other video conferencing systems. It was only when lockdown was first implemented that the widespread implementation of Teams was welcomed almost unanimously for practical and logistical reasons: the solution better supports the load of participation with good quality and a simpler user experience than Skype.

Yammer has also been rolled out in several organisations as a corporate social network, which helps to relieve congestion in mailboxes and other media and to share information more easily with the community.

The use of Jitsi, an open source and multi-platform solution, **is becoming increasingly widespread**, whether for strategic reasons, particularly concerning public utility organisations, or for political, security or business practice choices: Jitsi, for example, replaced Webex in one organisation not only **for cost reasons but also for security** (allowing exchanges on confidential subjects). In another company, Jitsi is even authorised for personal use, the aim being to offer a highly secure and functional tool to enable employees to keep in touch with their social sphere, which was greatly appreciated.

Finally, a real question arises about **sovereignty**. The strong dependence of French companies' activities on American suppliers is, more than ever today, a subject of critical reflection for the future. For example, a major American supplier announced to a company that it was stopping its support on certain projects to prioritise its efforts to maintain its infrastructures. This forced the IT Department to lay off the teams working on these projects. This raises real questions and reflections in terms of

sovereignty. Should providers be asked to move their offers to a hybrid model and increase the power of enterprise data centres with expansions in the volume of cloud computing to allow for greater autonomy? Furthermore, the consequences of the health crisis in the United States may lead to the shutdown of certain teams at major providers, with more operational consequences in Europe than in the United States. Hence the importance of **creating fallback solutions**.

3.2. Major lessons

The lockdown fostered the expansion of open source software in certain organisations thanks to the boom in collaboration. Jitsi or Framasoft's tools show massive take-up. Their use has also taken off with remote learning. **The open source community was up to the task**; it supported the load and continued with security, without linear costs.

The staff have all become proficient in using collaborative tools. This raises the question of the format of in-person meetings in the future: they may no longer be so numerous thanks to the more widespread use of videoconferencing and collaborative tools.

As for **video conferencing practices**, some prefer video because non-verbal communication and visual contact is considered as important for maintaining relationships. Others prohibit video for bandwidth reasons. Audio accompanied by a shared collaborative notepad can be sufficient for most meetings.

For Google Workspace users, **the feedback is very positive**, both on the performance of the tools and on their functionality. **Meet meets all collaborative needs.** Everything was already implemented and ready to support remote work and mobility, both the hardware (Chromebooks) and the software. There is no need for VPN or an antivirus with a Chromebook. Users have "clear-eyed confidence" in Google Workspace's tools, but if sensitive topics so require, alternative tools can be used to complement them (such as Jitsi).

For some organisations, it was necessary for several departments to **find the right balance between security and simplifying remote access** without creating vulnerabilities.

No loss of productivity of remote working teams was observed. On the contrary, the workload has even increased in some cases, and meetings are more efficient; they go straight to the point. In addition, **employees benefit from considerable time and energy savings** without the "commute" factor. However, the negative side of this observation is the lack of informal discussions between the teams, because the **collaboration also occurs in these informal exchanges and meetings** that take place in the office.

In conclusion, collaborative suites are a preferred way to develop modular approaches between open source components and the packaged offers of major publishers. However, it is necessary to evaluate the value of the different functionalities of the collaborative suites on a case-by-case basis, as well as the suitability of open source offerings or standards to business units' needs. It may seem sensitive to consider a total or partial migration to open source components, given that the organisation's activities depend on these collaborative tools working properly, securely, reliably, and interoperably. However, the examples shared in this report demonstrate the many advantages of taking the leap to open source software, modernising IT and diversifying your approaches. The benefits arise as much in terms of attracting talent as in developing in-house skills and the company culture.

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Achieving digital success to help promote the economic growth and competitiveness of its members, who are major French corporations and public administrations, and users of digital solutions and services

Cigref is a network of major French corporations and public administrations set up in order to develop its members' ability to acquire and master digital technology. It is a unifying player in the digital society, thanks to its high-quality thinking and the extent to which it represents its members. Cigref is a not-for-profit body in accordance with the French law of 1901, created in 1970.

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4/ Belonging:
Cigref speaks with one voice on behalf of major French corporations and public administrations on the subject of digital technology. Its members share their experiences of the use of technology in working groups in order to elicit best practices.

5/ Intelligence:
Cigref takes part in group discussions of the economic and societal issues raised by information technologies. Founded nearly 50 years ago, making it one of the oldest digital associations in France, it draws its legitimacy from both its history and its understanding of technical topics, giving it a solid platform of skills and know-how, the foundation stones of digital technology.

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