xenit
return on content

Turning the Alfresco Digital Business Platform into a Managed Service with Alfred

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An ECM is not only a software, it is also a platform that needs to be managed and integrated with the overall processes.

EXECUTIVE SUMMARY

Organizations often realize that they need a strategic Enterprise Content Management (ECM) solution after they identify an overarching business challenge: processing, accessing and storing information becomes extremely difficult in the face of an excess of paperwork and/or unstructured information.

The Association for Information and Image Management (AIIM) has said that ECM is no longer an adequate definition for the ways in which organizations interact with these solutions. It has suggested that Intelligent Information Management (IIM) is more appropriate for describing the market space and the strategies associated with content management.

We, at Xenit, believe there are five strategic drivers for content excellence:

- **Think federated** - Instead of consolidation, strive for integration.
- **Think top down, build bottom up** - Start from a meta-model with master data capabilities so that organizations can create relevant context for their unstructured content.
- **Automate relentlessly** Exploit by design the automation that Artificial Intelligence (AI) and Machine Learning provide.
- **Build to Last** - Build for the Cloud, with zero-downtime qualities, even when you deploy on premise.
- **Scaling is paramount** - Rethink access control and move to the next generation in which properties are used to describe and manage policy, and also to control access to resources.

EXECUTIVE SUMMARY

Investment in ECM remains a priority for many organizations, whether via a new installation or an extension to an existing solution.

However, there are a disproportionately high number of failed initiatives and endless issues with user adoption, and therefore persistent reports of ECM's imminent demise as a business priority. How did the stark reality of ECM's performance end up crash-landing so far from its original promise for many organizations? And, more importantly, what are the strategies and tactics that will allow ECM to finally achieve its potential as the centerpiece of information governance and a principal driver of business value?

This e-Book looks at how to turn the Alfresco Digital Platform into a managed and integrated service in order to fully unlock the value of an organization's ECM and achieve higher availability and performance, thereby accelerating user adoption. The strategy driving an ECM is not only related to selecting the right platform, but also how best to manage it.

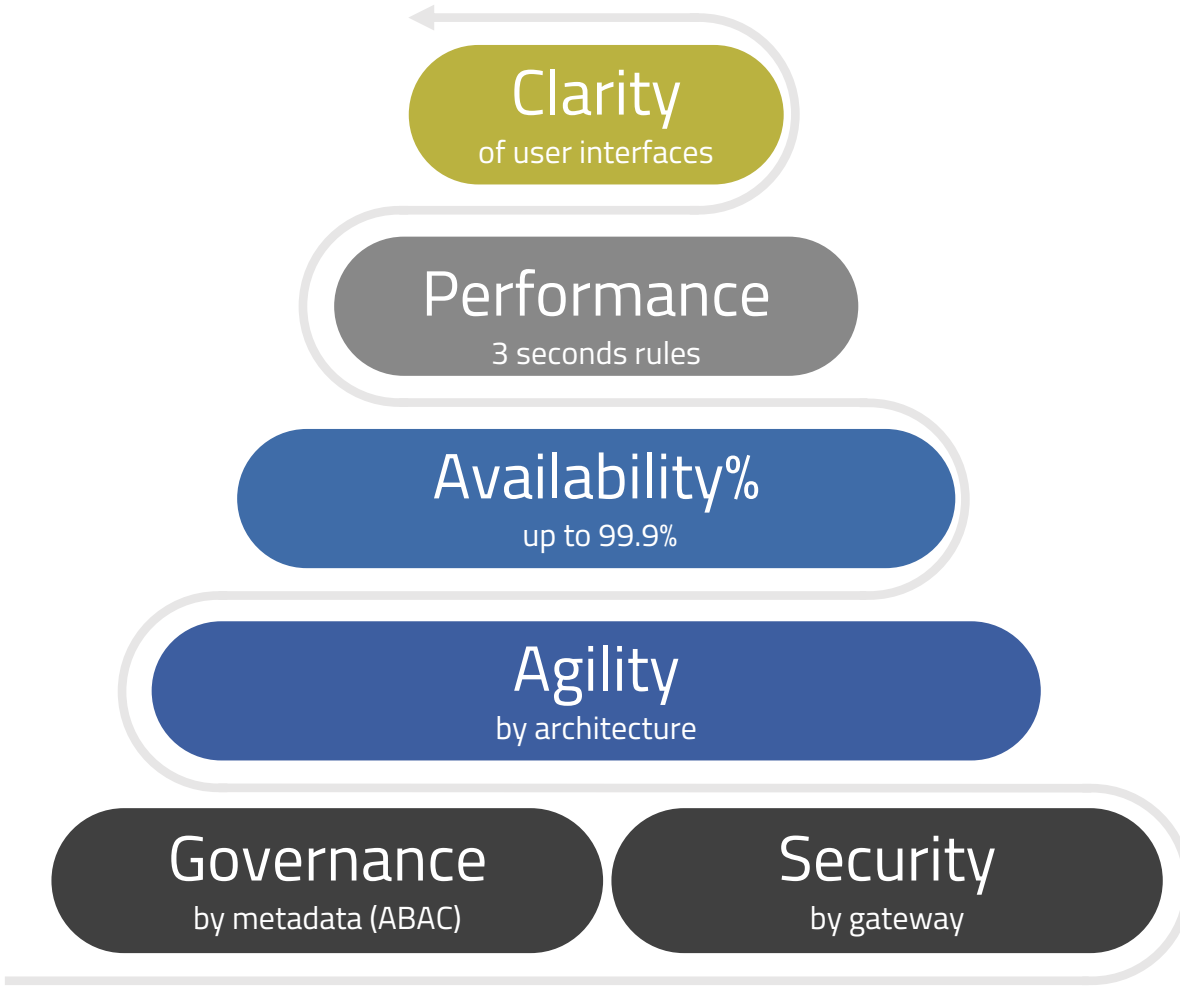
(1) https://www.opentext.com/file_source/OpenText/en_US/PDF/opentext-article-kmworld-stephen-ludlow-ecm-is-not-doomed-to-fail-en.pdf

QUICK LINKS

PART 1

The top six qualities any ECM should bring

The importance of the non-functional qualities of any ECM or IIIM system cannot be underestimated. We often focus on the capabilities, but we assume that the qualities are "out of the box". The reality is surprisingly different. Let's focus on the six core qualities any content service should bring:



The first four qualities (clarity, performance, availability, and agility) are either immediate satisfaction drivers or sources of frustration: with a lack of performance or availability comes an influx of complaints. Although it is hard to make a business case for the non-functional qualities, they are the final benchmark for project success.

In the digital transformation era, there is an overload of information supply, unrelenting information demand, constant multitasking and task interruption, and inadequate workplace infrastructure. There is an immediate need to exchange information across geographical, technical and organisational boundaries so that all departments, customers and related parties can work together in real time. A lack of clarity in results and interactions has an impact on people's time and on long-term ECM user adoption.

An organisation's business process evolves constantly. It needs the ability to move quickly, decisively and efficiently in sensing, responding to and exploiting change in the business environment. Agility is the capability to adapt and it necessitates stability. Agility introduces the concept of "quality of service", where:

- Real time processes take precedence;
- User queries come second;
- Short queries are handled first before "long and circumstantial" searches; and
- Ingestion of documents has a level of priority.

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We believe that content services alone are not enough, they should be conceived as *content-as-a-service*, in any cloud or on - premise environment

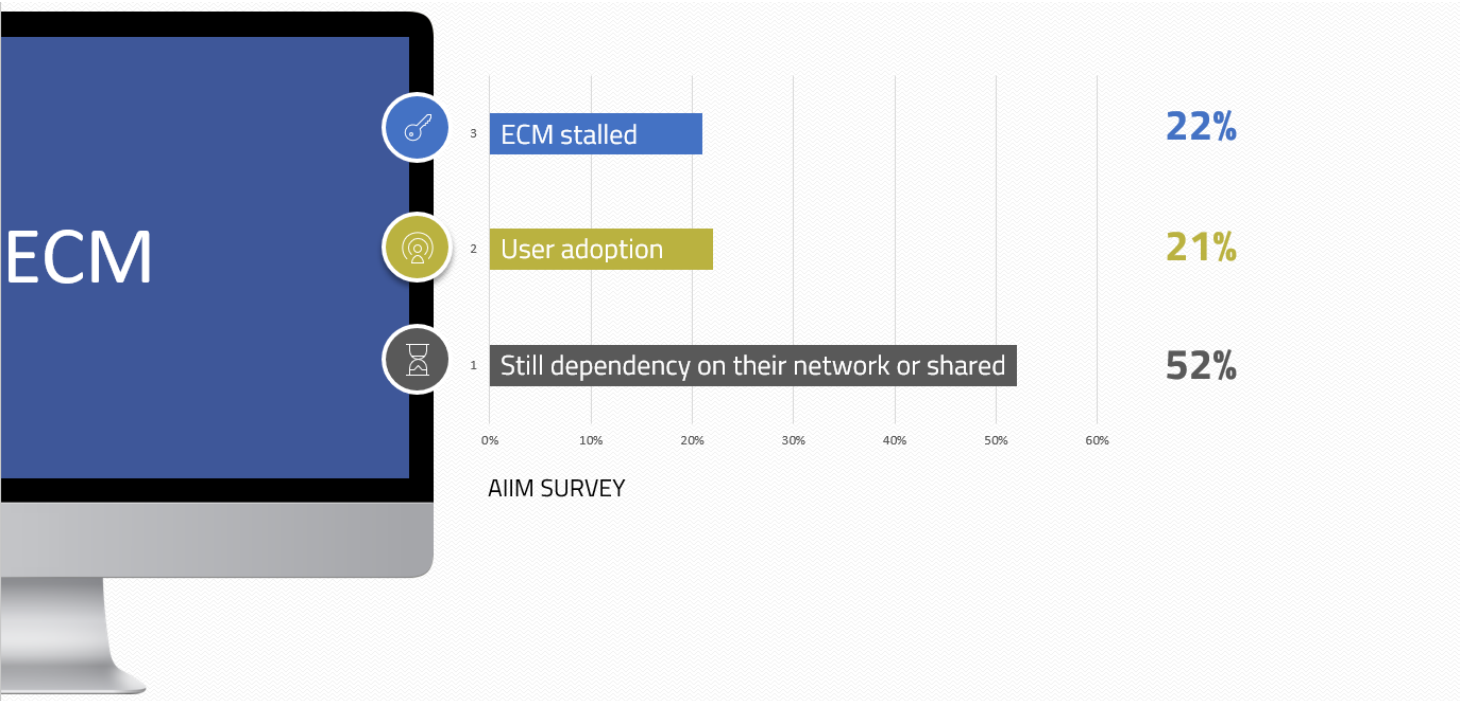
PART 2

Three reasons why ECM implementations experience high failure rates

By deploying an ECM system, organisations can benefit from the increased quality, integrity and accuracy of their most critical information. At the same time, the system supports knowledge workers by making information easier to find and utilise.

However, according to AIIM, nearly 50% of all ECM programs fails. Of the 50% that succeed, half of those fail to provide real value to the business.

- 22% regard their ECM project to be somewhat stalled
- 26% have user adoption issues
- 52% admit that they are still dependent on their network file shares



While most executives believe the company is clear on the definition of digital transformation, an obstacle to success is often a lack of alignment within the organisation defining what exactly digital transformation means. The pressure to transform comes at a time when IT budgets have remained relatively static, but IT is simultaneously being asked to deliver more to the business than ever before.

ECM planning and implementation were often topics of one-sided conversations, driven by business owners, focused on creating massive folder structures and defining complex classification rules to accomplish their goals. The actual future users of the system were rarely asked about what they wanted or needed—not only in terms of their interaction with the new application, but also about how it could potentially make their jobs more efficient and productive.

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"Past generations of ECM implementations failed because they were based on the idea of an ECM solution being a destination, not part of a process."

STEPHEN LUDLOW Director, OpenText Enterprise Product Marketing

PART 3

Most common strategic challenges for Alfresco customers

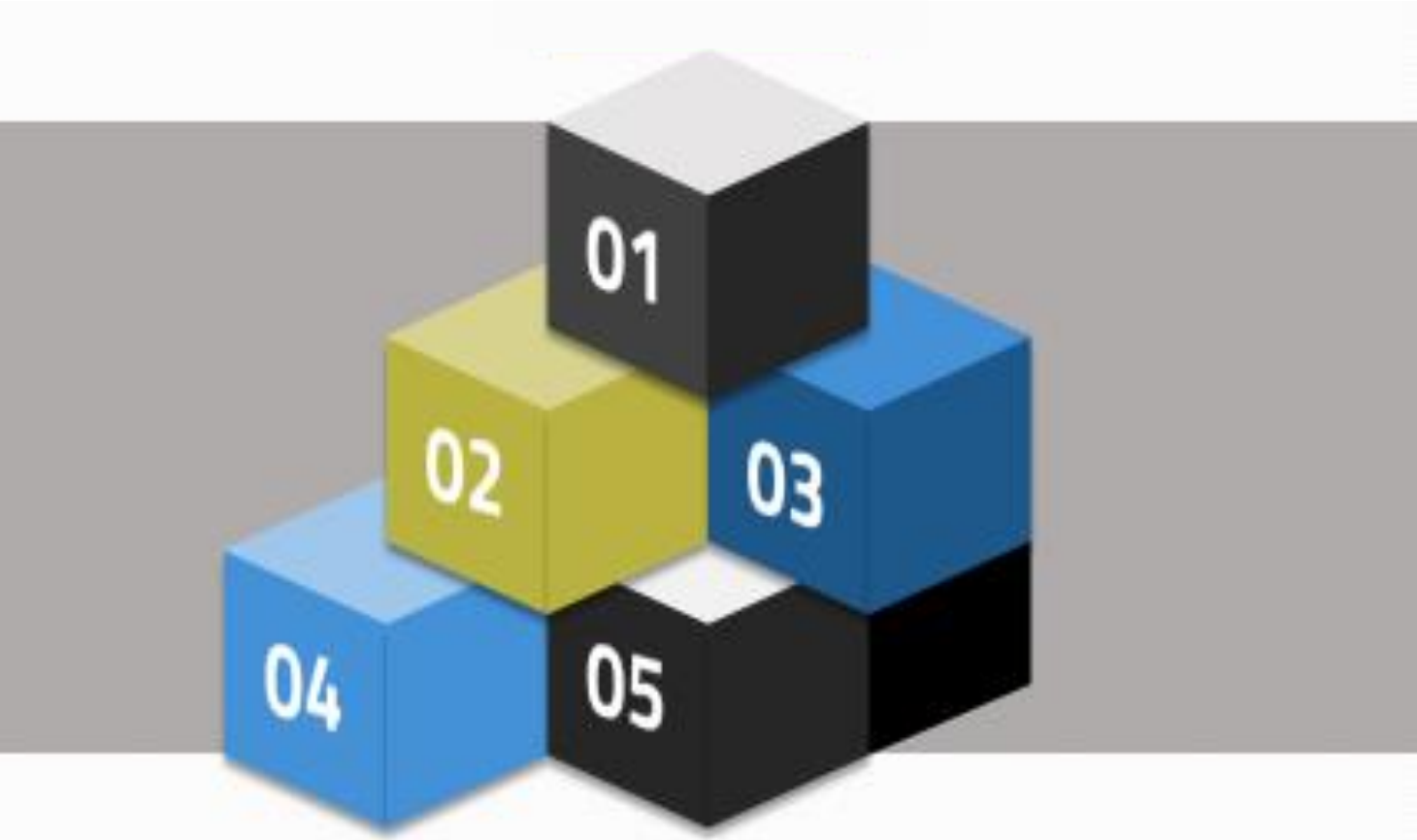
The Alfresco Digital Business Platform utilises IT to quickly develop modern document management solutions that accelerate the flow of business. Alfresco provides ECM solutions across cloud, mobile, hybrid and on-premise environments for clients to share, manage and retain documents, files and processes.

How would an organisation's ROI increase if it could deploy, on top of its platform, a fully integrated and open source solution to reach higher levels of user adoption?

How would an organisation's productivity increase if it could instantly find the information it needs, when it needs it?

How would an organisation benefit from an agile architecture that allows it to scale and accelerate time to market?

How would the lives of system administrators and engineers change if they could save time when addressing urgent interventions or doing proactive maintenance?



QUICK LINKS

01 **Tedious User Adoption:** ADF, Alfred Desktop, Alfred Finder

02 **Cumbersome Search Experience**: Alfred Finder

03 **Cost of Upgrades**: Alfred API's layer

04 **Lack of Scalability**: Alfred architecture

05 **Poor Performance:** Alfred Ops

1. Resistance to change and User adoption

Deploying an ECM system won't deliver the expected ROI if employees are resistant to using the system correctly and consistently. In fact, Gartner research indicates that more than 20% of ECM deployments are rejected because they've been deemed "unpleasant to use". Resistance to change? A lack of specific training? Fear of making mistakes? Whatever the reasons may be, ECM must counteract them by being a simple tool to learn and use.

Alfresco Share was originally built using a proprietary framework called Surf. It was immediately controversial because, even at that time (roughly 2009), there were widely-used frameworks that Alfresco could have chosen to build upon, but didn't. People often needed to build a custom user interface on top of the Alfresco repository. In 2016, Alfresco announced it would build a new framework (**ADF**) featuring components based on the popular AngularJS framework. This was a welcome announcement because it painted an appealing vision of a future in which a broader community of developers would be able to develop applications using well-known frameworks and established skills. However, it also caused concern because, for the seven years prior, customers had been configuring and extending Alfresco Share in a myriad of ways, ranging from small tweaks to massive custom applications. (2).

If organisations are running 5.2 or higher, clearly this is the Alfresco we would recommend. However, if organisations are still running the older versions or don't have the internal capacity to develop the user interface with the ADF framework, it may need other options, such as commercial front-ends.

(2) Jeff Potts - https://ecmarchitect.com/archives/2018/01/20/4314

Tip 01: Embed Your Alfresco within and across enterprise's systems

Embedding ECM within and across an enterprise's systems supports and improves performance across the entire organisation.

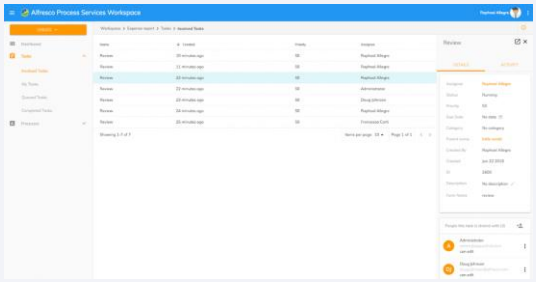
At **Ethias**, the third largest insurance company in Belgium, they use Guidewire policy and claim centre, and therefore that needed to be integrated into Alfresco. This was achieved by integrating **Alfred Finder**, which is the web application for Alfresco, into Guidewire. User adoption was a non-issue: knowledge workers continued to work in the applications they always had, and Alfresco worked in the background, providing far greater access to relevant information drawn from other lead applications.

The New York City Department of Sanitation is the world's largest sanitation department. It's been about eight years since they first started using Alfresco. They too faced the challenge of user adoption, with most users still working on a shared drive. They also had some performance issues due to their need to upload large files.

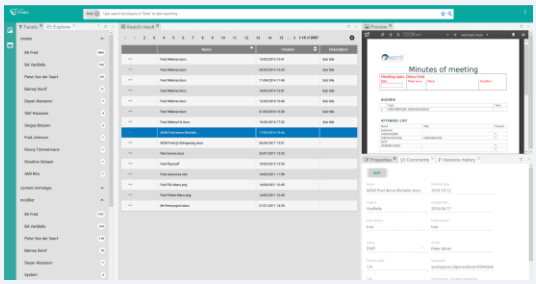
In 2016, they deployed Alfred Desktop, a native desktop user interface for Alfresco. Today, users can easily upload, preview and edit a large number of documents. They can also define and save search templates with business views.

A RANGE OF DIFFERENT USER INTERFACES TO ACCELERATE USER ADOPTION

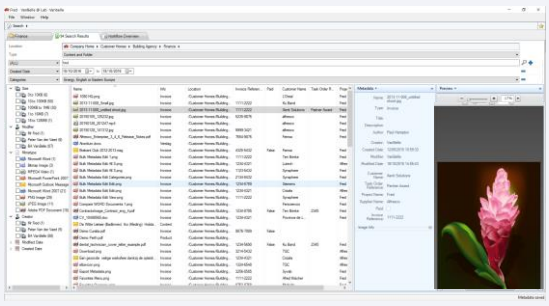
- **ADF -** You can use ready-to-use components, leveraging the popularity of the AngularJS framework and community. General speaking, ADF is a framework designed for developers that can rapidly build responsive and engaging web applications. Available from Alfresco 5.2 or higher versions.



- **Alfred Finder -** Change management is one of the most challenging elements with humans. Adding something to an existing way of working is easier than having to start using a new tool and developing a new way of working. Alfred Finder is a web application that is easily embeddable in your existing applications, to search and retrieve documents in your Alfresco repository.



- **Alfred Desktop -** Alfred Desktop is a Windows-native Alfresco user interface. It looks like Microsoft and acts like a shared drive. The interface was developed as a response to ongoing requests from the end-users of Alfresco to have Alfresco functionality in the Microsoft environment, better known as the shared drives.



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2. Being unable to find anything anyway

In 2012, McKinsey reported that "employees spend 1.8 hours every day—9.3 hours per week, on average—searching for and gathering information. Put another way, businesses hire five employees but only four show up to work; the fifth is off searching for answers, but not contributing any value."
Enabling employees to quickly find the information they need when they need it is one of the most compelling reasons businesses implement information management systems.

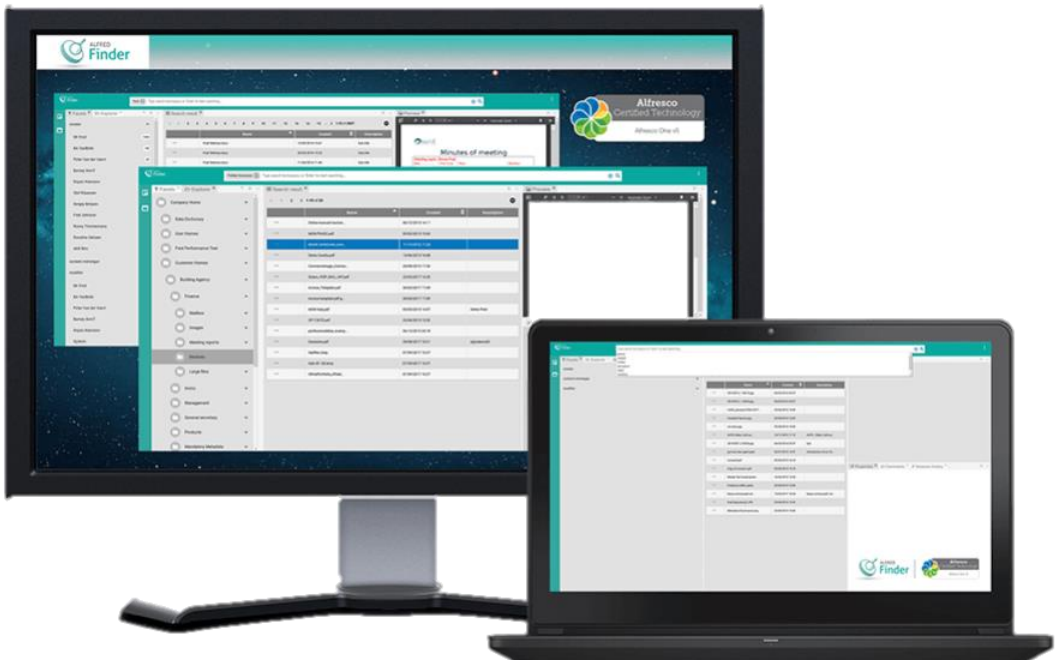
Performance and ease of use in a search interface is one of the most significant concerns clients have when deploying Alfresco. When looking at search functionality within Share, Alfresco utilises a Quick Search in the header bar at the top of the screen to allow users to quickly run a search. This interface can be slow, especially in large repositories, since it searches all documents across the repository, including metadata as well as full text. The search results generated can still be too broad resulting in too many documents returned.

Tip 02: Integrate advanced and federated search-based tools

Alfred Finder is our flagship product that works to provide a much better cognitive search experience. On our way to "zero search", we strive to return any search result in three seconds, deliver the required information in less than three clicks, and create a consistently successful search experience for 95% of users.

In a nutshell, **Alfred Finder** is a web application that allows users to find information and documents in their Alfresco through advanced search capabilities suggestions (type-ahead suggestions, AND/OR filters, etc.) and by leveraging Apache Solr technology. Finder is also integrated within Google Drive in order to search and find content across different repositories.

By simplifying the ability to search, retrieve, process and archive documents from anywhere in the enterprise, document management solutions, such as Alfresco, can enhance employee collaboration and speed up the decision-making process.



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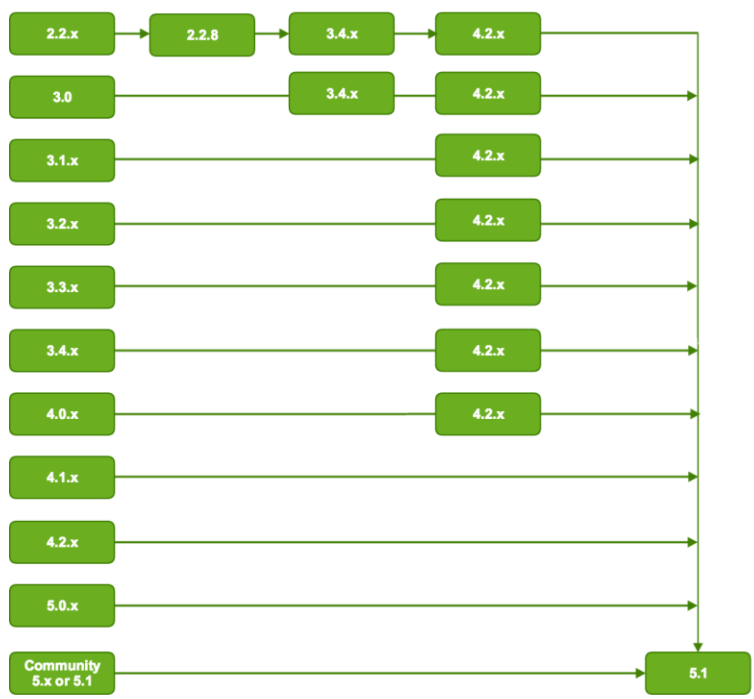
"Alfred Finder has got some really impressive features for building and saving queries and a blazing fast user interface."

JEFF POTTS – Consultant in Open Source Content Management, Search & BPM

3. The costs of maintaining and upgrading the platform

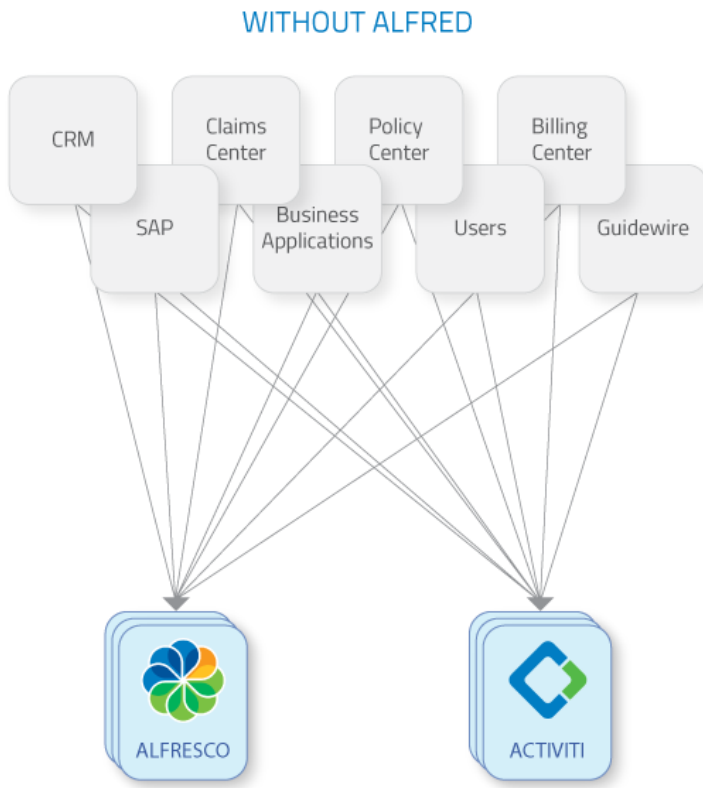
Enterprise software deployments rarely remain the same for long, as updates are frequently introduced to patch up issues, ensure security or boost performance. Alfresco's major versions include 2.x, 3.x, 4.x, 5.0. and 6.X (2.x is the oldest version and 6.x is the latest version). Recently, Alfresco has stopped providing support for any version that's older than 4.x. When planning an upgrade strategy, take into consideration it is not possible to directly upgrade to 5.x or 6.X as there are major functionality changes from the previous versions. Alfresco recommends that you go to an intermediate stable version before upgrading to the final version.

The primary driver of costs in upgrading Alfresco are not in Alfresco itself. Over the years, a number of integrations have been put into production, often in various ways and following different conventions. No API contract was established. Upgrading Alfresco leads to a complex chain of regression testing, as any ECM system is a horizontal service component.



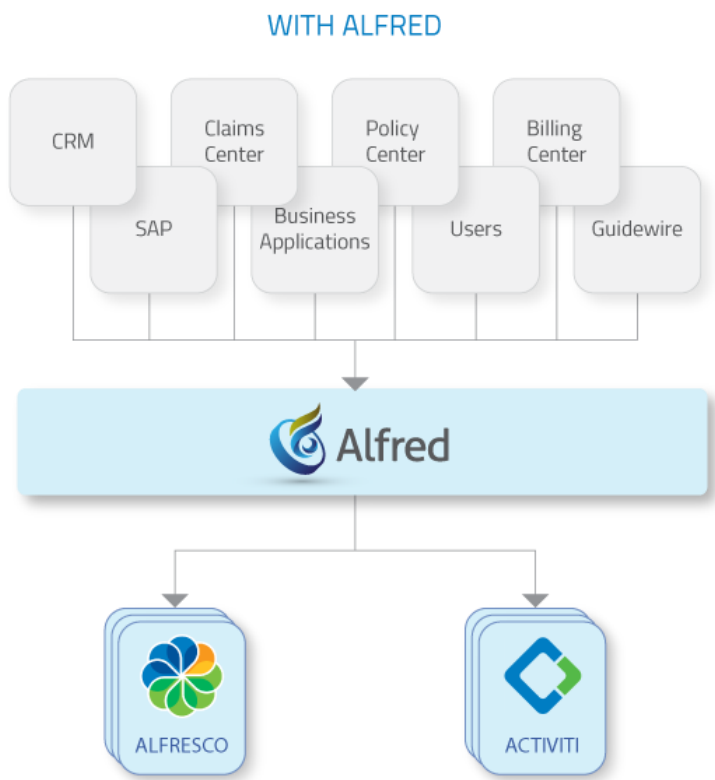
Tip 03: Isolating Alfresco upgrades from applications evolution

Let's assume that an enterprise is running one (or multiple) Alfresco content service(s) and/or Alfresco process service(s), and there are several applications linked to them. The current architecture may look like what we call a "spaghetti chart".

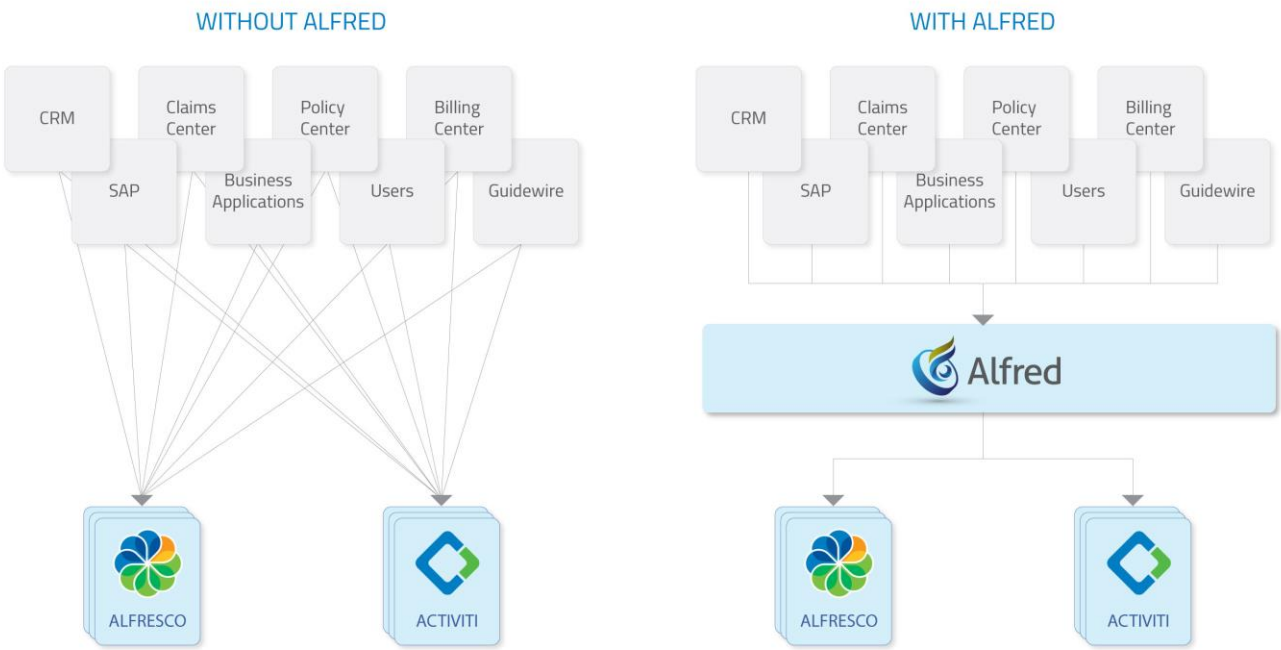


Anytime an upgrade is needed to the Alfresco clusters, all the business applications must be fixed because the Alfresco API has changed. As a result, operational and maintenance costs will increase significantly.

The solution we deliver consists of integrating a layer between your applications and Alfresco: a single entry point to your repository. With the introduction of Alfred API, connected via our gateway Alfred Edge, product teams do not have to worry about cross Alfresco version compatibility anymore. We created an API contract to deliver backwards compatibility (Alfresco 4.X, 5.X, 6.X) integration with Alfresco's API and controlled versioning with semantic versioning. So, the business applications can evolve in an agile way, the legacy can use an older version of the API, and Alfresco can continue to innovate with newer and better versions. All of that, without lots of costly and tedious regression testing.



Business applications are usually chosen and developed with longevity in mind. Therefore, it is important to build integrations of these business applications on a steady foundation. Staying up to date with Alfresco versions can be an extra challenge on top of that. Alfresco upgrades can introduce API changes. To overcome this challenge, Alfred API provides a stable, cross Alfresco version compatible API that hides underlying changes or even bugs. This allows teams to decouple Alfresco upgrades from business application updates, enabling smaller incremental rollouts with reduced risks.



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4. Lack of scalability

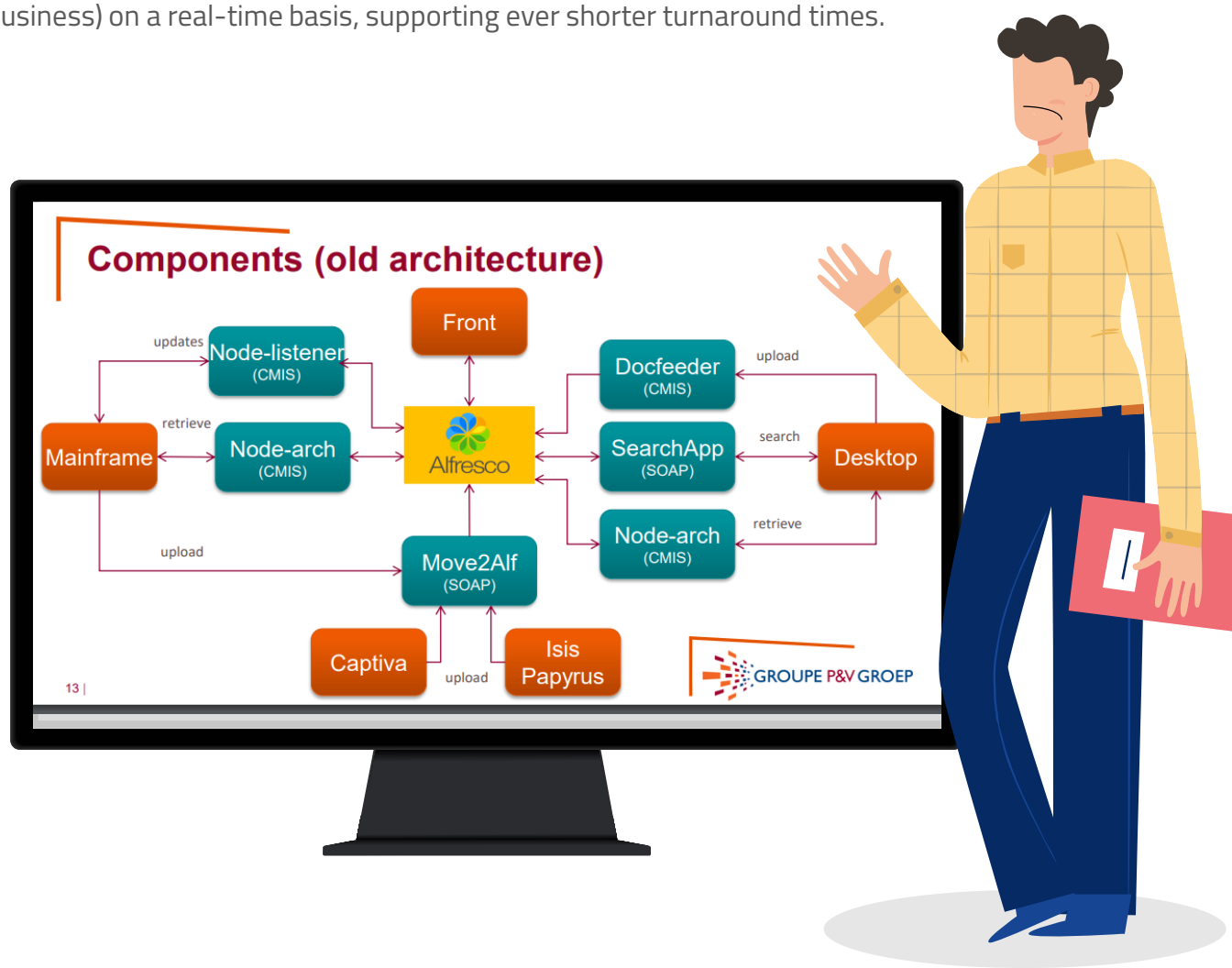
Driven by trends such as cloud, the number of applications used by companies today is huge. On average, large organisations are using more than 1,000 individual applications across their business. This means that agility in application integration is essential for growth in a changing market. Other key concepts which must be considered are the content archival process, site availability and disaster recovery.

P&V Group is a leading Belgian insurance company with over a century of history. Since 2008, P&V has used Alfresco and it has faced several digital challenges.
Its main goals were:

- Moving Alfresco from an archiving platform to an operational platform, which required high availability and integration with their business applications.
- Improving performance and robustness.
- Reducing TCO by consolidating different Alfresco instances, improving the upgrade strategy of Alfresco versions and reducing the operational follow-up of the platform.
- Moving from a batch-oriented platform to an online platform, with the need for real-time uploading of documents, consultation and bulk uploads without any impact on real-time processes.
- Zero downtime operations, 24/7.

When starting out with Alfresco, as is the case with most horizontal service layers, integration is limited and well defined. At some point, central architecture becomes less involved, and different integrations (web script, API, REST, CMIS) see the light of day. Moreover, document model variations are introduced, and often multiple Alfresco instances as separating business lines or operational from archive are good architectural principles.

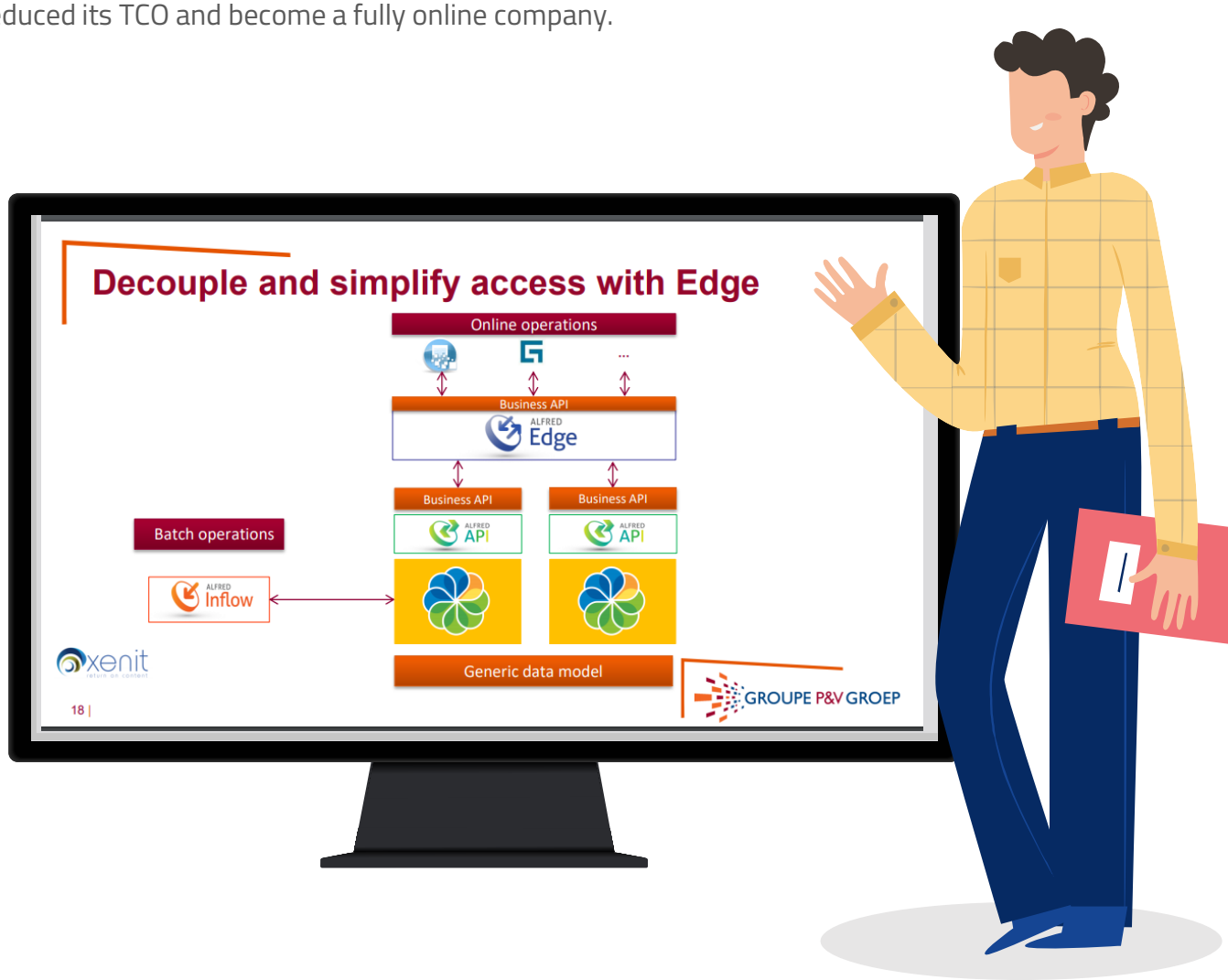
At P&V, different interfaces, protocols and models surfaced over the years, driven by business line needs and regulatory pressure. Where in the old days batch transfer of documents satisfied the business' needs, nowadays documents need to be integrated with business applications (claims handling, life and non-life business) on a real-time basis, supporting ever shorter turnaround times.



Tip 04: Decouple and Simplify the architecture

In 2017, P&V and Xenit created a reference architecture with a decoupling of vertical business applications from the horizontal Alfresco ECM layer. We established a foundation architecture, with Alfred Edge as a gateway, and a standardised business API for P&V built on top of Alfred API, which is our stable and multi-version API layer.

By redesigning and decoupling their architecture and simplifying the access to Alfresco via an integration layer, P&V today has decreased its time to market, reduced its TCO and become a fully online company.



Technically, the Alfred components have brought a number of benefits that are relevant to any organisation that needs to scale content-centric processes:

- **Alfred Inflow** is an "out of process" bulk ingestion facility that handles daily incoming document flows, data issues, reporting and scheduling, and facilitates error recovery where applicable. Inflow typically ingests 35 to 55 documents per second, although it can be driven to 150 or more documents per second with proper database and Solr tuning.
- Alfred Inflow applies smart "backpressure" to ensure Alfresco quality of service. In short, it pushes Alfresco to ingest documents at high speed, but reserves enough processing resources for other operations that requires a fast and synchronous response.
- **Alfred Edge** is an API gateway that, together with a business API, decouples the architecture. Changes are applied at the technical API level, and business applications are not affected by internal (Alfresco) upgrades.
- **Alfred API** is our open source layer on top of Alfresco API in which we achieve a number of qualities:
    - A stable, contract-based API towards third party applications.
    - A versioning system to make sure that current and new developments are correctly supported.
    - Optimisations in the API, such as bulk edit, for which Alfred API delivers more efficient code on top of the Alfresco core.

To make the foundation architecture at P&V successful with a number of ever-evolving applications using Alfresco content services, the three core elements (Alfred Edge, P&V business API, and Alfred Inflow) have established a quality of service level that allows P&V to scale and adapt to new competitive challenges and opportunities.

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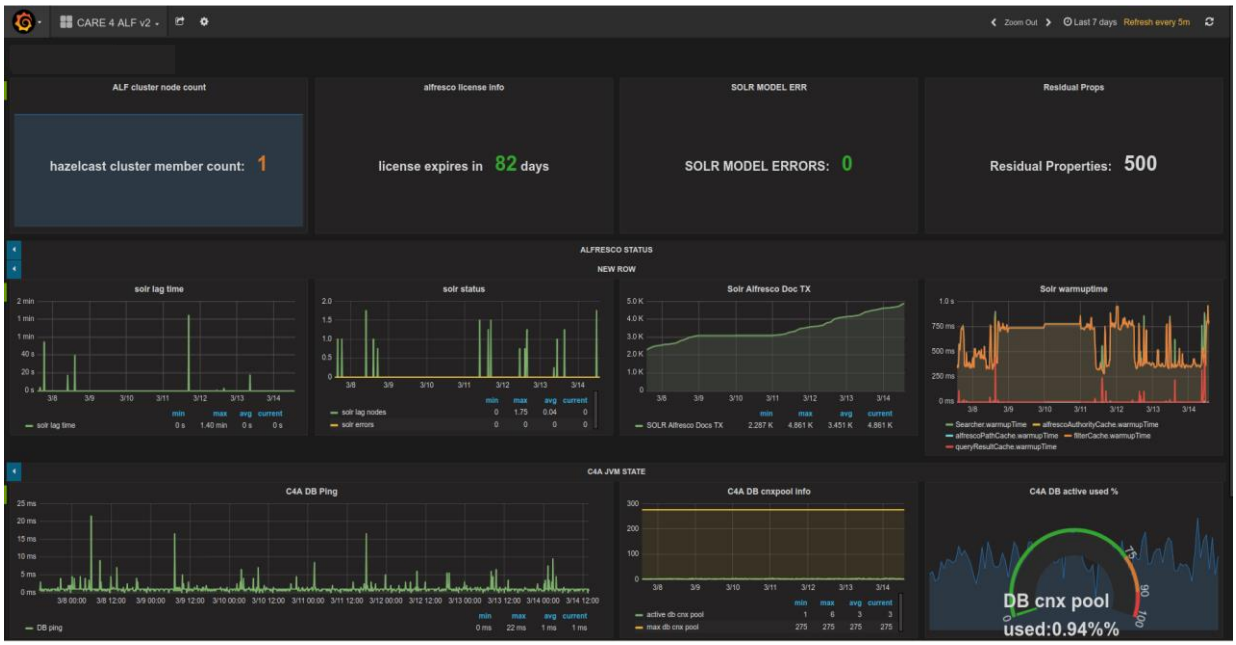
5. Alfresco is (not) slow

One problem we consistently hear from our customers is that “the system is slow”. Performance is a complicated factor and can depend on many different components typically outside of the control of the Alfresco support resources.

- Performance depends on factors inside and outside of ACS
- Performance is a balance
- Quality of Service is a balance

Tip 05: Proactively monitor Alfresco

To support Alfresco development, maintenance and system management, we developed a set of tools to actively monitor and maintain an Alfresco installation. They measure parameters such as the availability of Alfresco, CPU usage and the relevant information from log files.



Alfred Ops allows you to know if users are getting errors — if so, which users — and more importantly, why. It applies a strategy of logging, metrics and tracing to support high availability, performance and security.

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PART 4

Alfred Quick Tour

Alfred is a software suite that is fully integrated into Alfresco. Our software provides two additional user Interfaces, API Integration, Monitoring Solution and Storage Connector for Alfresco. These components extends the Architecture of Alfresco making it more performant. In addition to the software components, Xenit provides an SLA with each subscription which guarantees that your Alfresco will be Performant, Scalable and up to 99.99% Available.

Xenit's offering can be considered as "Managed Services as a Product" since we combine our SLA with our Alfred solution. Xenit offers three types of SLA's whenever an Alfred subscription is sold (Standard, Business, Enterprise). Read more here.

Alfred Suite is ideal for:

- Scaling up your Alfresco to ingest from 1K to 1 M new documents per day
- Increasing integration with cloud or back-office services
- Business critical, real time behavior required
- Increasing interaction with partners and customers via internet, using a dedicated and secure entry points
- Leveraging the cloud as an archive
- Outsourcing & automating your system administrators

ALFRED SERVICE LEVEL AGREEMENT

Alfred's Service Level Agreement ("SLA") between Xenit and our customers is a guarantee that outlines how our combined Software and Services will support the customer's Alfresco ECM environment. This SLA will cover how Xenit will respond to (1) Incidents, (2) Availability (3) Resolutions (4) Response Time. As an overview, the chart below provides an example of the services and metrics Xenit will offer to customers.

	Starter	Business	Enterprise
SOFTWARE			
Alfred Desktop, Finder, API	▲		
Alfred Full Suite		▲	▲
API CALLS			
Calls per user	10,000	50,000	200,000
Total calls	2M	50M	1B
SERVICES			
Help Desk	▲	▲	▲
Incident Management	▲	▲	▲
Monitoring		▲	▲
METRICS			
Incidents Response Time	8 h	4 h	2 h
Resolution Time			8 h
Incidents		Unlimited	Unlimited
Availability		98%	99%

ALFRED GRAPHICAL USER INTERFACES (GUI)

Alfred includes two user interfaces for Alfresco, for desktop (Alfred Desktop) or web users (Alfred Finder), and the integration with other applications:

- Drag and drop functionalities, versioning, full metadata support, preview, workflows, permission-based access control.
- Advanced search capabilities (type-ahead suggestions, AND/OR filters), leveraging Apache Solr technology.
- Outlook, Google Drive, Guidewire and many other integrations.
- Alfresco Community and Alfresco Enterprise support and compatibility.

ALFRED APIs (Intelligent Integration Layer)

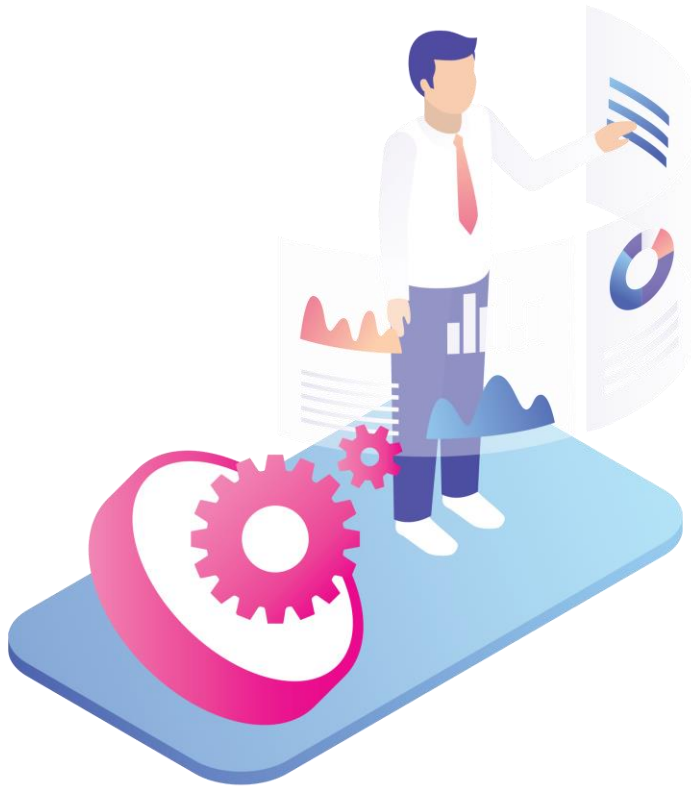
We deliver backwards compatibility (Alfresco 4.X, 5.X,), integration with Alfresco's API and controlled versioning. The integration layers provides:

- Real time operations and high speed documents migrations
- API governance: protecting business data and privacy (audit trails, authentication, file encryption, metadata driven automatic permissions…)
- Federated searches: retrieving information from Alfresco, Google Drive and Office 365 (in the roadmap)

ALFRED MONITORING

Alfred Ops delivers system and application monitoring for running and optimizing Alfresco enterprise installations. It applies a strategy of logging, metrics and tracing to support high availability, performance and security. It allows you to:

- Correct data and configuration errors
- Gain additional insight into Alfresco operation



ALFRED OBJECT STORAGE

Beyond 10 million documents, file and block storage are impractical to scale. Alfred integrates Alfresco with Caringo Swarm, an S3 object storage, through a connector.

With Alfred Object Storage connector, you can:

- Secure your content with multi-data center DRP (Disaster Recovery Plan)
- Define your versioning policy to avoid greedy and complex multi-tier back-up strategies

Thank you

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