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Bridging ECM and ERP: OpenText™ Extended ECM and the Oracle® E-Business Suite

This white paper discusses some of the key considerations for ensuring accessibility and syncing communication between ECM and enterprise applications, including process continuity, risk and compliance, the importance of process context and wider integration with data and information in other systems. It also includes real world examples of companies reaping the rewards of an extended ECM approach.

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Introduction

In this "Zettabyte era,"[1] where global internet traffic reaches more than one zettabyte each year, it's not enough for businesses to simply "manage" content. Users must be able to consume it and organizations must be able to monetize it—and manage the risk of exposure associated with it. And regulators must be able to assert their governance over it. This is a challenge, given the volume of information, legacy silos and line-of-business systems and the disparate information types within organizations today.

Blurred lines

Organizations have to manage unprecedented volumes of structured data, as well as unstructured information formats, including email, videos, images, social media, presentations, reports and documents. To add to the challenge, the lines are blurring between data held in enterprise resource planning (ERP) systems, such as Oracle E-Business Suite, and traditional Enterprise Content Management (ECM) suites. Contracts, delivery notes, specifications, claims forms and correspondence may end up recorded and stored in specific modules of a company's ERP system. Likewise, accounts payable processing of scanned invoices may often be driven by a workflow in ECM or Business Process Management (BPM) systems, requiring background links to the transactional data in the ERP system.
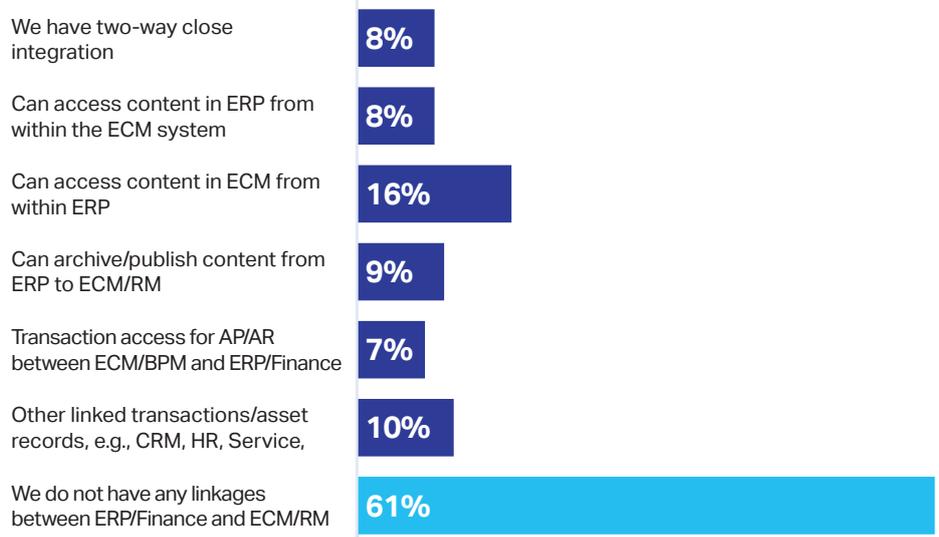
Fractured insight

With critical information scattered all over the enterprise, including departmental ECM systems, non-ECM enterprise systems and local hard drives, there is often little or no line of sight or communication between them. This causes duplication and out of date, incorrect or inaccessible information with high storage and license costs, poor governance, increased risk as well as organizational inefficiency. This fractured insight slows productivity, blocks agility, inhibits growth, increases costs and frustrates users.

Bridging the ECM-ERP integration gap is business-critical in today's digital economy. ECM must connect all company data and information, regardless of where it was generated. Structured data generated by ERP applications is significantly enriched when related documents and other unstructured information are accessible. While the Oracle E-Business Suite lacks the built-in ability to do this, extended ECM solutions, such as OpenText Extended ECM for Oracle E-Business Suite, can address this need.

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1 Arthur, Charles. The Guardian, Technology Blog "What's A Zetabyte? By 2015, The Internet Will Know (2011) https://www.theguardian.com/technology/blog/2011/jun/29/zettabyte-data-internet-cisco

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How closely coupled is your ECM/DM/RM system to your ERP finance system?

We have two-way close integration	**8%**
Can access content in ERP from within the ECM system	**8%**
Can access content in ECM from within ERP	**16%**
Can archive/publish content from ERP to ECM/RM	**9%**
Transaction access for AP/AR between ECM/BPM and ERP/Finance	**7%**
Other linked transactions/asset records, e.g., CRM, HR, Service,	**10%**
We do not have any linkages between ERP/Finance and ECM/RM	**61%**

Source: AIIM

Yet, according to AIIM[2], 61 percent of more than 300 companies recently surveyed have no connection between their ECM and ERP solutions.

Of those that have integrated ECM with ERP, 24 percent only have a one-way content link, while a mere eight percent have a two-way link and only seven percent have implemented an AP/AR transaction link. The linkage between ECM and other applications, such as CRM and HRM, is less than 10 percent.

Unlocking the potential

Content-centric processes become more efficient when unstructured information is readily available within the context of business processes and transactions. But ensuring this accessibility and syncing communication between ECM and enterprise applications, like Oracle E-Business Suite, must be done in real time to get meaningful value and unlock the potential of extended ECM. Forrester[3] estimates extended ECM can deliver an average 68 percent ROI over three years.

Negative impact of information silos

Information silos decrease enterprise visibility, complicate searches and compromise adherence to records management retention rules, including duplicated content in multiple versions and outdated information, incorrect or inaccessible information as well as high storage costs. They also increase risk and governance issues and litigation discovery challenges and hamper productivity and organizational inefficiency.

Propagating more silos is bad practice and leads to outdated, irrelevant information. Poor quality information is also bad for business, with Ovum[4] estimating that it costs businesses at least 30 percent of revenues. But while IT strives to eliminate silos internally, business must continue. This is more challenging when an organization can't properly harvest what is stored in its silos.

2 Mancini, John. AIIM: The Digital Landfill, Prelim ECM Survey Results: What's Your ECM Strategy (2015) http://info.aiim.org/digital-landfill/prelim-ecm-survey-results-whats-your-ecm-strategy

3 Kahn, Bill. SAP, Forrester Report: Content Management Solutions Deliver 68% ROI Over Three Years (2017)www.digitalistmag. com/cio-knowledge/2017/10/30/forrester-report-content-management-solutions-deliver-68-roi-over-3-years-05473731

4 Geiger, Jakki. Informatica Blog on Ovum Research, How Much Does Bad Data Cost Your Business? (2014) https://blogs.informatica.com/2014/04/16/do-you-know-how-much-bad-data-is-costing-your-business/#fbid=j_vIoWkHwrg

"Context is worth 80 IQ points."

Alan Kay, renowned MIT professor and serial inventor

Aside from being hidden from the wider enterprise (and typically only at the fingertips of the handful of users who put it there), the information itself is isolated—divorced of meaning because it lacks any contextual value.

It's not just the inability to identify and locate business information, whether it's structured or unstructured, but also to harvest and consume it within a contextual business process. This failure to appropriately find, move and consume information isn't just frustrating, it slows business performance.

When information and data don't easily integrate with each other to support the horizontal flow of corporate information across its lifecycle, users have to work much harder to find their value. According to Digital Clarity Group[5] ROI typically increases three to five times when processes access content at the beginning of a business activity, rather than having it tacked on as an afterthought or left to languish on the shelf.

When ECM is executed properly, users continue to work, uploading and sharing information as needed, while ECM automatically happens behind the scenes, applying metadata and creating value from the content that is being managed
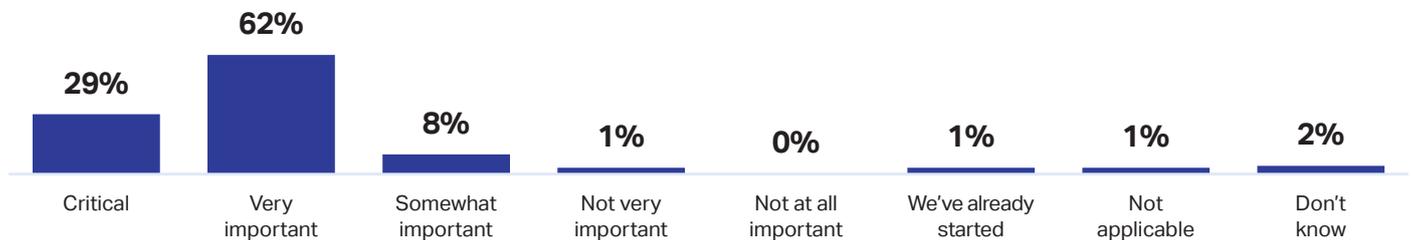
The power of business workspaces

Information needs to be relevant, actionable and personal and be integrated with an organization's leading processes. Achieving contextual, universal content access, regardless of location or format, is the great barrier that organizations need to overcome. To do so, they need to integrate extended ECM with the business application, for example, Oracle E-Business Suite. One of the best ways to achieve such deep integration is through the use of business workspaces.

A business workspace natively extends Oracle processes with ECM content and capabilities. It should integrate deeply into the Oracle E-Business Suite landscape and be able to reuse everything that is already standardized in Oracle E-Business Suite, such as Oracle data, structures, roles and permissions and even user interfaces. And most importantly, it should be able to sync in real time so the Oracle E-Business Suite and ECM are always in step. This way, organizations can articulate value on a completely different level for all processes running in the Oracle E-Business Suite, as well as those processes outside of it.

Importance to achieve real-time synchronous communication between ECM and enterprise applications

Level of importance according to organizations who have or plan to implement ECM

Critical	Very important	Somewhat important	Not very important	Not at all important	We've already started	Not applicable	Don't know
29%	62%	8%	1%	0%	1%	1%	2%

Source: IDG

A recent IDG Market Pulse Survey[6] found that 91 percent of businesses consider it highly important to sync communication between ECM and enterprise applications in real time. In fact, 61 percent of respondents report a high level of interest in integrating ECM with enterprise applications.

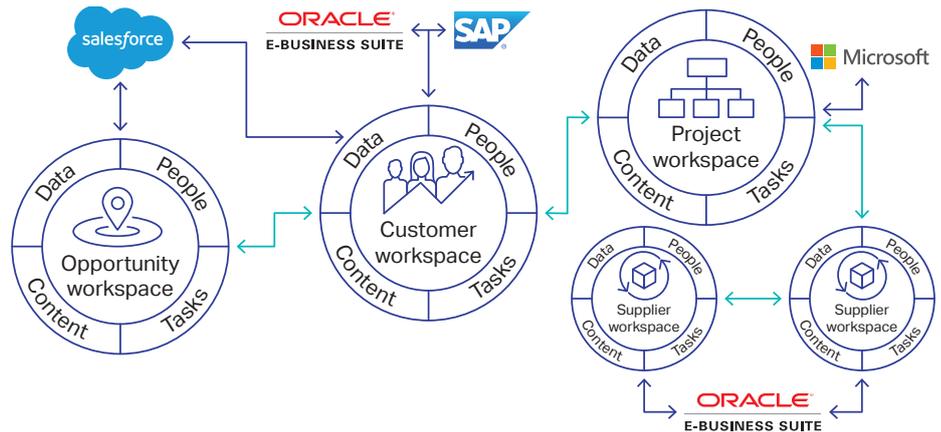5 Moore, Connie. Digital Clarity Group, Transform Insights, Improve Operational Excellence and Delight Customers With Extended ECM (2016) https://www.opentext.com/file_source/OpenText/en_US/PDF/opentext-third-party-dcg-insight-brief-extended-ecm-en.pdf

6 IDG Global Market Pulse Research, Optimizing Enterprise Applications (2017) https://www.opentext.com/campaigns/release-16-content-suite-content-cloud

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Integrating and collaborating beyond Oracle E-Business Suite

As digital business automation extends to complex processes that cross multiple systems and involve interactions with many types of information, the value of information-fueled business processes multiplies with the number of business systems and ecosystems connected to it.

Extended ECM platform—network of business workspaces

Source: OpenText

This demands an open, versatile ECM platform that can seamlessly integrate Oracle E-Business Suite users with the data and information held in other leading systems across the enterprise, such as Salesforce®, Microsoft® and SAP®. Extending the reach of ECM to all parts of the enterprise injects content into the context of cross-system business processes to improve insight, efficiency and throughput.

In or out? Storing information in transactional systems

There has been considerable debate in recent years as to whether large unstructured information files, such as scanned image files, Microsoft® Word documents, spreadsheets, video or voice recordings, should be stored inside transactional databases as Binary Large Objects (BLOBS).

Although, in theory, there is no need to separate these objects and store them in a dedicated file store or content library under the operating system, some ERP systems, such as SAP, do exactly that. While it may save some storage costs through the use of tiered storage over time, it may also limit the ability to de-duplicate and compress and could also impact overall transaction performance.

Oracle E-Business Suite continues to pursue the "store it all in one pot" approach, relying on specific tuning to maintain database performance. Close integration of the ECM system with the ERP system can allow for off-loading of files to dedicated archive storage on an appropriate choice of storage media, suitably de-duped, compressed and secured.

In well-designed systems, ECM-optional or dedicated archive storage provides built-in support for protected storage devices, as well as tiered options for lifecycle management and archiving in general. This can reduce storage costs between 10 and 30 times compared to high-end transactional database storage, according to independent research analysts, AIIM[7].

7 Miles, Doug. AIIM, ECM Hurdles A Barrier (2015) www.project-consult.de/files/AIIM_MIWP_ECM_ERP_Integration_2015.pdf

The complexity of process continuity

In practice, for any end-to-end transactional business process, some related information may live within the ERP system and some may live outside, in ECM, or more often in file shares or a capture system for inbound paper forms and documents.

For more document-centric processes, such as invoice processing in AP, the process workflow may live outside of the ERP, in the capture system, ECM or in a separate BPM system. This would require transactional details to be accessed from ERP to facilitate, for example, three-way matching to complete the processing of a purchase order.
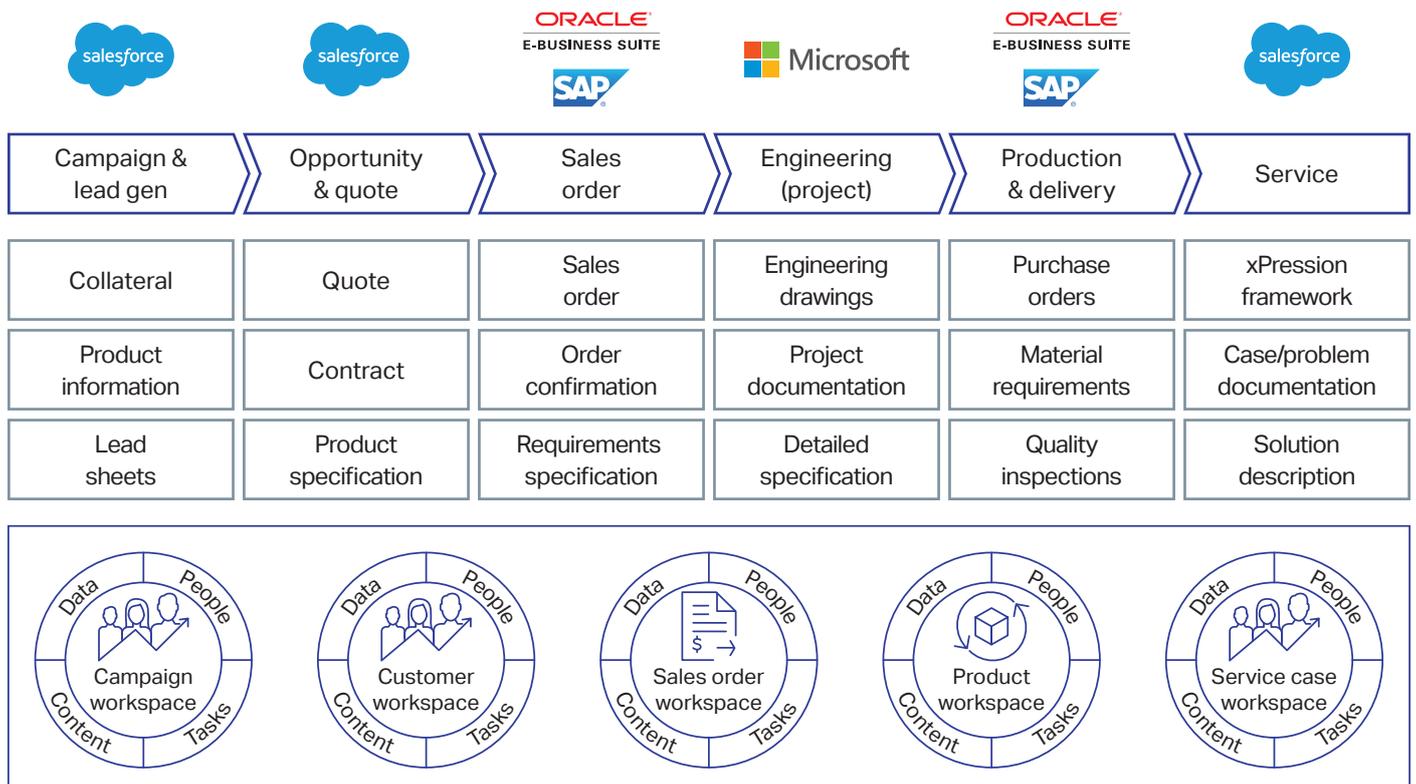
In this case, users would have to access more than one system to get their job done, which is not ideal. The real challenge, however, arises if documents involved in the workflow need to be approved, revised or signed-off; if checks on verification are required or if several documents need to be shared with external project members. In these cases, it gets more complicated. And because relatively few people will have a log-in and appropriate rights in both the ERP and ECM or capture systems, it is likely documents will end up being attached to emails for multiple recipients, governance and compliance steps will be missed and workflows are more likely to be held up until a key approver returns to their office. Those in the ERP workflow will not be able to monitor this delay until the off-site documents are returned.

Preserving referential integrity

Most integrations between ERP and ECM rely on index keys, such as supplier IDs, invoice numbers, asset numbers or part numbers to reference the link between the two systems.

For example, if an organization is purchasing an item for inventory, the part number in Oracle E-Business Suite will provide the link in ECM to related data sheets, supplier correspondence or health and safety instructions.

Extended ECM platform—sample process: opportunity to revenue

Campaign & lead gen	Opportunity & quote	Sales order	Engineering (project)	Production & delivery	Service
Collateral	Quote	Sales order	Engineering drawings	Purchase orders	xPression framework
Product information	Contract	Order confirmation	Project documentation	Material requirements	Case/problem documentation
Lead sheets	Product specification	Requirements specification	Detailed specification	Quality inspections	Solution description

Campaign workspace	Customer workspace	Sales order workspace	Product workspace	Service case workspace

Source: OpenText

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As part of the procurement process, they may need sign-off from the design department for use of an alternative part from a different approved supplier. The designer may be working remotely as part of a multi-company design team and will receive a workflow instruction through ECM to sign-off the substitution. They may need to look at the delivery record of the new supplier, which involves a cross-reference back into Oracle E-Business Suite, to which they may not have log-in access. However, with a close integration to Oracle E-Business Suite, there will be strong cross-reference links to related and viewable records and data within the Oracle E-Business Suite for key "need to know" ECM users, which will also update if the preferred supplier is subsequently changed.

A closely coupled ECM not only enables organizations to create "master" workflows to consistently orchestrate all of these processes, it also allows responsible parties to see consistent content in context through connected business workspaces embedded in the systems they're already using. External users can also engage in internal processes through seamless content and business object updates without having direct access to internal systems or content repositories.

The human factor: User adoption and millennial expectations

Of course, good content automation and rich functionality are redundant if users don't adopt them. Creating an easy to use, engaging user interface and an intuitive, collaborative user experience are important considerations in selecting an ECM. Yet these are often overlooked because organizations assume they are standard. It's also one of the main reasons that native extension and deep integration are so important, as they directly shape and impact the user experience.

The other consideration of course, is the need to cater to the digital expectations of new generation hires. As millennials enter the workforce, their expectation is for all information to be readily available at their fingertips, regardless of format or location. They also have little patience for multiple log-ins to different systems or long, frustrating search procedures. To this digitally empowered generation of users, mobile content, systems and workflows are required. Without them, companies risk losing valuable talent to competitors who can deliver a more rewarding and relevant user experience.

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Located in Doha, Qatar, Barwa Real Estate began operations in 2006 to develop large-scale commercial and residential projects both domestically and internationally. Today, the group has operations in many areas across the rapidly developing Middle East region, including real estate development, financial, business and infrastructure services.

Following rapid growth and investment in Oracle E-Business Suite to automate financials, procurement and other critical business operations, Barwa faced challenges in managing the growing volume and diversity of its digital information. Large real estate development projects, including luxury hotel resorts, shopping malls, offices and apartment complexes often run for many years, with dozens of organizations and individuals requiring timely access to content of many types.

Challenges

- Compromised performance
- Longer search times
- Increased storage costs
- Hindered collaboration

Benefits

- Improved performance with storage burden removed from Oracle
- Faster search and retrieval with all content in one place
- Reduced storage costs due to less content duplication
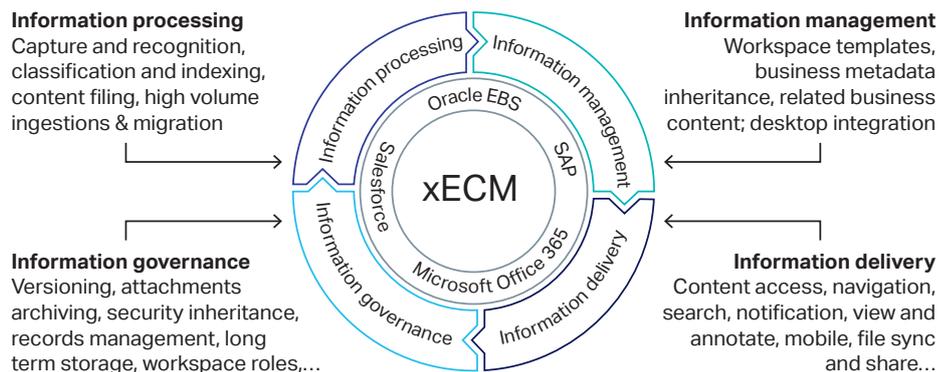- Improved collaboration and document version control

Solution

- OpenText™ Extended ECM for Oracle® E-Business Suite

Records management and compliance

As organizations examine their critical information, they need to ensure that governance is provided consistently across both their structured process data and their unstructured business information.

Information governance, security and compliance with legislation and policy, as well as reduction in risk and cost, should be the foundation of ECM.

Multiply the value of your content—from information processing through governance…

Information processing
Capture and recognition, classification and indexing, content filing, high volume ingestions & migration

Information management
Workspace templates, business metadata inheritance, related business content; desktop integration

Information governance
Versioning, attachments archiving, security inheritance, records management, long term storage, workspace roles,…

Information delivery
Content access, navigation, search, notification, view and annotate, mobile, file sync and share…

Source: OpenText

Consistent, secure, auditable information governance

Each line of business, including purchasing, project management, HR, lease and contract management, will have different processes with varying types of information. And all will have differing degrees of security and access restrictions, which need to be managed in accordance with corporate policy and regulatory mandates.

ECM should combine automated capture of physical and electronic information, ongoing management of the information within all user environments, classification and records management, secure and cost-effective storage, archival and defensible deletion of content in accordance with policy. It should provide the ability to search and find all types of information, automate processes inside and outside the Oracle E-Business Suite and collaborate and safely share content inside and outside of the organization. The objective is to maximize information accessibility and productivity while ensuring compliance to regulations and reducing risks and costs associated with information.

The GDPR: Data's shift from potential liability to potential opportunity

All regulation has some sort of impact on corporate resources, and the GDPR is no different. But it also represents a huge opportunity to improve business processes and make meaningful changes for the better.

Under the GDPR, organizations must adopt a data processing approach that uses the smallest possible amount of personal information for the shortest period of time and deletes the information as quickly as possible after processing is completed for a specific purpose. This is the complete opposite of what most companies have been doing for years. This 'data minimization' approach, limiting the collection of personal data for a specific purpose, requires compliant and defensible information management, which goes with sound Enterprise Information Management (EIM) practices.

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> **"Extended ECM users continue to use the familiar Oracle E-Business Suite environment and can still see documents in their unique business transaction context within the OpenText [business] workspace embedded right into Oracle E-Business Suite Projects or any other E-Business Suite module. When they select a content item, the OpenText solution quickly and seamlessly delivers it to them without them having to leave their familiar Oracle environment."**
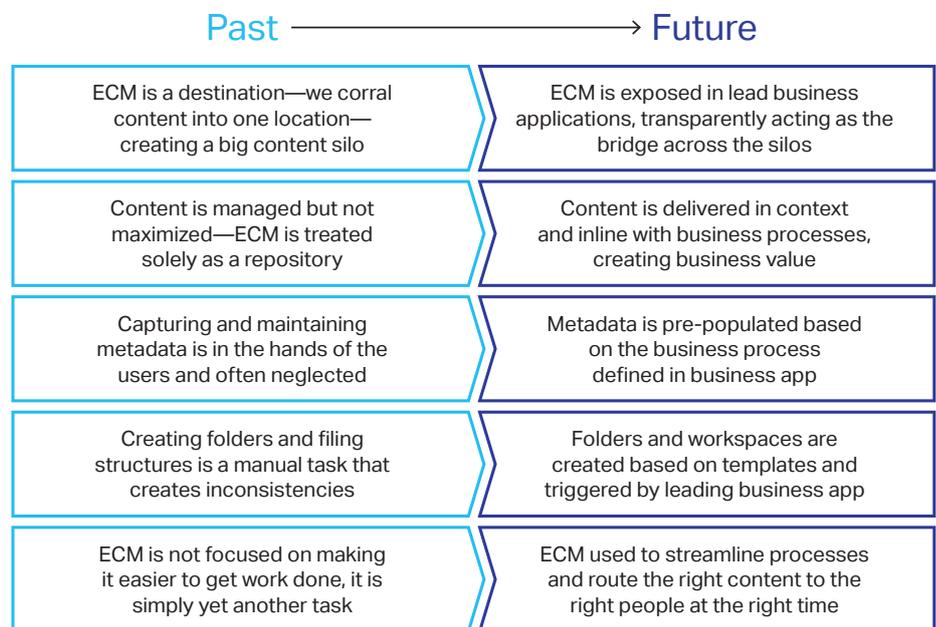>
> Kavindra Gali, ERP Technical Expert
> Barwa Real Estate Group

Data is hidden in siloed systems, shared with partners or stored on memory sticks and mobile phones. As part of the GDPR discovery process, organizations must map out the multiple information flows, regardless of where it sits. This includes normalizing data, delivering single versions of information and an accurate real-time insight of all data held and demonstrating compliance to protect the rights of data subjects and fulfill the six data protection principles under the GDPR.

Five ways digital transformation has changed ECM

Organizations are looking for a digital-first vision for their business processes. Extended ECM is the foundation for that vision, digitizing and automating information processes and changing how information is managed.

General benefits from enabling digital transformation

Past ⟶ Future

Past	Future
ECM is a destination—we corral content into one location—creating a big content silo	ECM is exposed in lead business applications, transparently acting as the bridge across the silos
Content is managed but not maximized—ECM is treated solely as a repository	Content is delivered in context and inline with business processes, creating business value
Capturing and maintaining metadata is in the hands of the users and often neglected	Metadata is pre-populated based on the business process defined in business app
Creating folders and filing structures is a manual task that creates inconsistencies	Folders and workspaces are created based on templates and triggered by leading business app
ECM is not focused on making it easier to get work done, it is simply yet another task	ECM used to streamline processes and route the right content to the right people at the right time

Conclusion and recommendations

The need to integrate financial and ERP systems, such as the Oracle E-Business Suite, to content-based ECM systems is well documented. The goal is to achieve as close an integration as possible, with single-point information access, seamless workflows and mirrored permissions matching with extended access through cloud and mobile, local and federated search, distributed and multichannel capture, robust records management, efficient archiving and flexible case management.

This kind of broad, deep and unobtrusive integration between the Oracle E-Business Suite (and other ERP systems) and ECM systems is a tall order and goes well beyond technical connections to demand rich context across a range of line-of-business requirements. The integration solution is best sourced from an ECM supplier, which should also maintain its multiple platform variants and releases, avoiding the need for organizations to recruit and retain deep in-house expertise.

When looking to consolidate and modernize across multiple content systems, it is vital that organizations consider requirements for collaboration, inbound capture, BPM and records archive. It is also important to consider the level at which a potential replacement ECM system integrates with the Oracle E-Business Suite and the degree of expertise and experience embodied in that integration.

When considering extended ECM, organizations should:

- Audit the content repositories that reside within their Oracle E-Business Suite, paying particular attention to ease of search, governance and retention and storage requirements.

- Consider how (and whether) the business system might make better use of external tiered storage to reduce data center costs, if they are storing large amounts of archived content in high availability database storage (as BLOBs).

- Assess who has access to these repositories and who could make good use of them if they had simpler access, including remote/mobile workers and external partners.

- Look at the processes that call up information from these repositories or archive content to them, as well as the other repositories and systems accessed during the process. They should pay particular attention to references needed to deal with exceptions, to support approvals or where documents are widely shared.

- Examine workflows that cross between systems or that involve hand-offs between one system and the other, including those involving inbound capture and database pre-population.

- Assess current content management systems and their applicability to modern needs. If they have a consolidation strategy, they should include the ease and level of integration that can be achieved between the preferred ECM system and the Oracle E-Business Suite, as well as the robust records management that may be needed under both to meet compliance requirements.

- Be wary of in-house developed integration. A pre-integrated, vendor-supplied ECM product will not take up internal resources to maintain through upgrades and extensions. The vendor's intimacy with the internal mechanisms of both systems is also likely to pay rewards in levels of functionality and support of issues.

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10-point checklist when evaluating extended ECM:

1. Deep native integration of extended ECM with the Oracle E-Business Suite and other business applications

2. Ability to sync in real time so the Oracle E-Business Suite and ECM are always in step

3. Universal, contextually-aware content access, regardless of location or format

4. Seamless integration for Oracle E-Business Suite users with the data and content held in other leading systems across the enterprise, such as Salesforce, Microsoft and SAP

5. Tight integration of the ECM system with the Oracle E-Business Suite for off-loading of content files to dedicated archive storage

6. Modern, intuitive user interface and collaborative user experience

7. Consistent, secure, auditable information governance and strong compliance capabilities

8. Ability to combine automated capture of physical and electronic content, ongoing management of the content within all user environments, classification and records management

9. Ability to search and find all types of content, automate processes both inside and outside the Oracle E-Business Suite, and collaborate and safely share content within and external to the organization

10. Digital foundation for automating information processes to help organizations in their quest to create a digital-first information management strategy

About OpenText

OpenText, The Information Company™, enables organizations to gain insight through market leading information management solutions, on-premises or in the cloud. For more information about OpenText (NASDAQ: OTEX, TSX: OTEX) visit: opentext.com.

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