Reference Architecture Brief: A Digital Workplace Model

> The variety of digital workplace services available to organizations is overwhelming, and the task of aligning them with an organization's digital workplace strategy is complex. Technical professionals should use this document to assemble the components for a complete digital workplace.

Architecture Brief

The digital workplace reference architecture defines, and shows the relationships between, the components required to deliver a comprehensive digital workplace. This architecture, and its components, applications and connections, are ultimately designed to support the end user. The central end-user productivity components form the key capabilities that a user interacts with, and show how these complement the overall digital employee experience.

The architecture defines how these components must integrate with a company's wider business application portfolio and other services, such as customer relationship management (CRM), enterprise resource planning (ERP), and data and analytics services. The architecture and all its constituent components must be underpinned by core operational services, such as identity and access management, security, compliance and governance controls.

The end-user productivity components must be scalable as a collection of composable integrated solutions from multiple best-in-class vendors, or be consumed as a holistic suite of preintegrated services, such as Google Workspace or Microsoft 365.

The architecture complements Gartner's "new work hub" model for selecting and combining workplace applications (see Quick Answer: What Is the "New Work Hub"?) and digital employee experience (DEX) blueprint for transforming work to improve business outcomes (see Use Gartner's DEX Blueprint to Mature Your Digital Workplace Strategy). The aim of this architecture is to provide a technical professional's view of workplace technologies in support of these models and strategies.

Architectural components may be delivered as part of a software-as-a-service (SaaS) offering, provided by installed applications on-premises, or run within an infrastructure-as-a-service (IaaS) container. Regardless, integrating components into a user-centric, seamless, yet still cost-effective and manageable service is the digital workplace technical professional's challenge. The architecture helps by showing the relationship between components in order to highlight needed technical trade-offs or identify optimization opportunities.

The architecture enables technical professionals to assemble a comprehensive suite of digital workplace capabilities to improve end-user productivity, meet complex business requirements and satisfy end-user experience expectations.

Architecture Use Cases

A digital workplace reference architecture must provide capabilities for multiple use cases. Specifically, it must:

- **Enable frictionless communication and collaboration for end users**: There must be solutions that enable frictionless communication and collaboration for end users. Solutions must support and enable synchronous and asynchronous collaboration for ease of use, improved user efficiency, and productivity.

- **Foster best practices for content and knowledge management (KM)**: There must be solutions that enable organizations to oversee content throughout its life cycle, including business records management and retention policies. Effective processes and disciplines for knowledge capture, curation, reuse and accessibility are essential.

- **Improve personal productivity across devices and applications**: There must be solutions that provide a wide choice of devices (desktop, laptop, mobile and virtual) with which users can access applications and corporate data and collaborate with colleagues. Applications and devices must provide a "fit for purpose" digital experience that promotes employee enablement and increased productivity, while enforcing corporate security and data protection standards.

- **Offer seamless, contextual integration with line-of-business applications**: Users increasingly expect line-of-business applications and support services to be available in their core productivity apps. Organizations that can provide an integrated and connected service between productivity solutions and line-of-business applications will have a significant strategic and productivity advantage.

- **Enable administration, management, governance and reporting oversight**: Core operational service components must underpin the digital workplace architecture and support the productivity components. This ensures the services are delivered in a secure and compliant way, safeguarding user identities and company data, while offering detailed insights and analytics into service performance, adoption and user behavior.

Architecture Diagram

The digital workplace reference architecture (shown in Figure 1) places the employee at the center, surrounded by the productivity components that the employee interacts with. These components enable the end user to accomplish collaborative work easily using intuitive solutions. The components may integrate with the user's line-of-business applications for role-specific tasks and workloads without requiring the user to context-shift to another application. The employee should also be supported by self-service portals such as intranets or HR systems for internal communications and other services such as expense submission.

Underpinning the end-user productivity components, the core operations layer enables everything above it to function. It represents the bedrock on which all end-user productivity and business applications are supported.
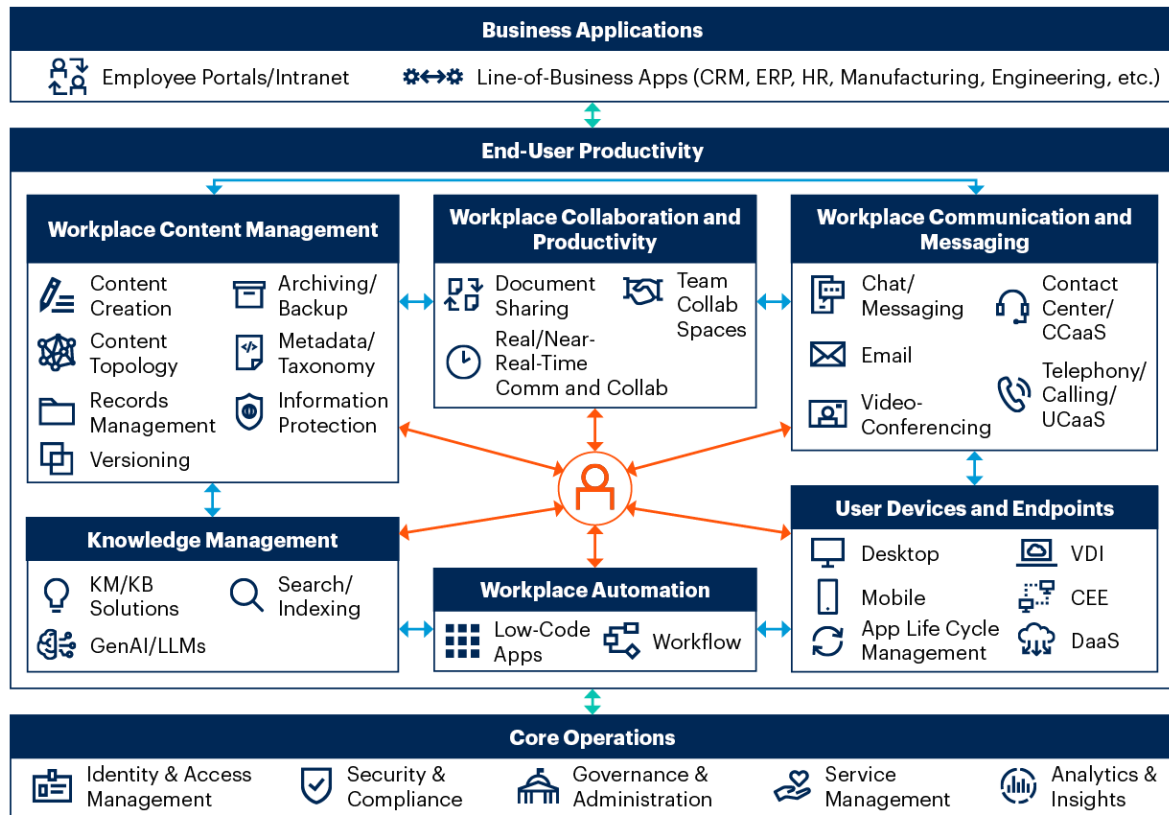
The business applications component contains all the other services and line-of-business application integrations that the end-user productivity components need to connect with. These business applications provide specific workload-based services and other supporting services to the end user.

The architecture diagram emphasizes the need to integrate the core operations and business application layers via the end-user productivity components. This ensures the architecture has the supporting services required, while also allowing for growth and scalability. You must ensure your digital workplace architecture incorporates these attributes by design, whether your architecture is composed of a suite of components from a single vendor or is a composable, multivendor architecture.

Figure 1: Digital Workplace Reference Architecture

Digital Workplace Reference Architecture

Legend: ■ Capability/Component → User Interaction → Component Relationship → Integration Touchpoint

Business Applications
- Employee Portals/Intranet
- Line-of-Business Apps (CRM, ERP, HR, Manufacturing, Engineering, etc.)

End-User Productivity

Workplace Content Management
- Content Creation
- Archiving/Backup
- Content Topology
- Metadata/Taxonomy
- Records Management
- Information Protection
- Versioning

Workplace Collaboration and Productivity
- Document Sharing
- Team Collab Spaces
- Real/Near-Real-Time Comm and Collab

Workplace Communication and Messaging
- Chat/Messaging
- Contact Center/CCaaS
- Email
- Telephony/Calling/UCaaS
- Video-Conferencing

Knowledge Management
- KM/KB Solutions
- Search/Indexing
- GenAI/LLMs

Workplace Automation
- Low-Code Apps
- Workflow

User Devices and Endpoints
- Desktop
- VDI
- Mobile
- CEE
- App Life Cycle Management
- DaaS

Core Operations
- Identity & Access Management
- Security & Compliance
- Governance & Administration
- Service Management
- Analytics & Insights

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Figure 1 shows the digital workplace architecture's three main areas — end-user productivity, business applications and core operations — and their interdependency:

- **End-user productivity:** The end-user productivity components are those that the end user interacts closely with. These components must be scalable as a suite of preintegrated products, such as Google Workspace or Microsoft 365, or as a composable architecture of multiple discrete but integrated vendor solutions. The components must be complementary and allow for growth and business change, while being capable of supporting and integrating with new and emerging technologies such as generative AI (GenAI) and intelligent AI content processing. End-user productivity components include:

  - **Workplace content management:** Services that provide content creation capabilities with end-to-end content life cycle management from content creation to archiving, backup, and records retention and deletion.

  - **Workplace collaboration and productivity:** Provides capabilities for document sharing and collaboration in both real time and near real time, as part of a team within a collaborative content workspace.

  - **Workplace communication and messaging:** Functionality for broad communication, such as email, chat and messaging. It must also include voice and video capabilities for conferencing and meetings.

  - **User devices and endpoints:** Provides suitable physical and virtual devices and applications in traditional or SaaS form, combined with modern device management and software-patching capabilities.

  - **Workplace automation:** Enables citizen development capabilities using low-code/no-code solutions for end-user business process workflow automation and application development.

  - **Knowledge management (KM):** Covers search and indexing related to content management, collaboration, and communications, including KM as a discipline and solutions for integrating with large language models (LLMs) and GenAI to augment knowledge flow and capture.

- **Integration components:** The integrated and supporting business application and core operations components provide both key business services beyond the end-user productivity capabilities and the foundational core operations that support the end-user components. Integration is the key objective for these components, and any business application or core service must integrate seamlessly (technically or operationally) with the end-user productivity components. The primary aim is to focus on open and standards-based approaches to integration and either minimize or avoid the need for specialized or proprietary integrations. It is important to evaluate the integration capabilities and patterns for all selected solutions and vendors to ensure they provide strong integration capabilities with your core productivity tools. The integration components include:

  - **Business applications:** Especially line-of-business applications that run the organization's business and drive the end-user's daily workflow.

  - **Core operations:** These provide the core underpinning services and capabilities required to deliver digital workplace services in a secure and compliant way.

Architecture Capabilities and Components

The following sections describe the capabilities and components required to build a digital workplace architecture.

Workplace Content Management

A content management service provides the user interface and storage mechanism for a diverse range of content, including, but not limited to, the documents, blogs, forums, web content, wikis and digital media that are key to all business operations.

Content management components include:

- **Content creation:** An easy-to-use control panel and user interface for simple content creation, including updating and editing of existing content. It must be compatible with either browser-based or thick-client document processing software on both desktop and mobile devices.

- **Versioning:** Support for major and minor versions, version security trimming, and version locking or check-in/check-out functionality.

- **Content topology:** There should be logical hierarchies at the business process, organization or team/department level for data separation and security boundaries.

- **Metadata tagging:** This should involve either global organizational or local process/departmental metadata taxonomies with capabilities for different contextually relevant metadata field types. These metadata fields must be searchable and refineable by the end user to facilitate easy search and content retrieval.

- **Information protection:** Capabilities for content sensitivity labeling, watermarking and encryption, including data loss prevention (DLP) policies for sensitive content and workspaces.

- **Records management:** Capabilities for content archiving; e-discovery and legal holds for compliance searches; and defensible destruction for content at the end of its life cycle.

- **Archive and backup:** A granular and flexible archive, backup and restore capability to ensure data can be recovered in the event of accidental or malicious data loss.

These components enable the user to create, store and manage content in a single location, accessible from any of their chosen devices, while ensuring compliance with corporate information governance and security requirements.

Example Technologies

- Microsoft SharePoint Online

- OpenText Documentum

- Hyland Alfresco/Nexeo

- Box Content Cloud

Key Characteristics

- Support for content creation principles, such as create, edit, update and delete, including granular permissions.

- Ability to create and track versions and the version history of each item of content. This should include check-in/out, major and minor versions, content publishing, and draft item security.

- Ability to build content and organization topologies and logical content structures that match the organization's required structure.

- Support for both macro- (organizationwide) and micro- (document-type-specific) metadata taxonomies and everything in between.

- Ability to label content with varying levels of sensitivity and associated levels of information protection, including encryption, watermarking and DLP policies.

- Retention and records management capabilities, including archiving, e-discovery, legal holds and defensible destruction.

- Granular backup and restore capability.

- Compatibility with emerging technologies such as GenAI, natural language processing and semantic search.

- Integration with the chosen collaboration solutions, support knowledge management scenarios, and business process automation workflow services.

- Inbuilt capabilities and support for business-specific process requirements such as e-signatures, intelligent document processing, content summarization and external sharing.

Related Research

- [When to Migrate Your On-Premises File Shares to Microsoft 365](#)

- [Solution Path for Document Management in Microsoft 365](#)

- [Prepare for the Change Impact of Microsoft Stream (on SharePoint)](#)

Workplace Collaboration and Productivity

Collaboration components overlap with content management components, especially for content sharing and external collaboration. They must also interface closely with communication components, such as those used for meetings and chats. Collaboration services provide their own key capabilities, such as user interaction scenarios for real- and near-real-time collaboration and team content collaboration workspaces.

Collaboration components include:

- **Document sharing and co-authoring:** The ability to share documents and offer a co-authoring experience for multiuser real-time content updates natively within a tool.

- **Real- and near-real-time communication and collaboration:** Closely aligned with chat and instant messaging capabilities and co-authoring, collaboration services must-have capabilities for real-time and near-real-time collaboration either directly within content or in the context of chat threads and meeting conversations.

- **Team content collaboration workspaces:** These workspaces should have features for creating and adding components to pages and workspaces that are authored in real time. These content assets are used as persistent items of content as part of a living content and collaboration canvas.

These collaboration services and workspaces allow users to work together in real time and co-author content, irrespective of their location or device. Their capabilities help to reduce collaborative friction for users working in a hybrid environment in which groups are split across working locations.

Example Technologies

- Microsoft Teams

- Slack

- Mattermost

- Microsoft Loop

- Atlassian Confluence

- Monday.com

- Notion

Key Characteristics

- Capabilities for one-to-one, one-to-many chat threads and conversations, and many-to-many collaborative chats and meetings.

- Capabilities for both real-time and near-real-time collaboration (synchronous and asynchronous), as well as co-authoring capabilities to reflect changes in real time.

- Alignment and integration with the primary content management solution for storage and management of content and items created in collaborative scenarios.

- Formed of composable elements in order to build a collaborative and evolving workspace (of pages, channels, chat threads, lists, wiki pages and so on). Also included may be components and data pulled in from line-of-business systems and collaboration solutions.

- Enablement of both internal and external collaboration use cases and content sharing across organizational and business boundaries for secure intra- and inter-business collaboration.

Related Research

- What IT Needs to Know About Microsoft Teams Connect Shared Channels

- Near-Time Collaboration Tools Reshape How Teams Work Together

- Guidance Framework for Managing External Sharing in Microsoft 365

- Assessing External-Sharing Options in Microsoft 365

- The Top 10 Gotchas of Microsoft Teams Meetings

- The Top 10 Gotchas of Teams Chat and Channels

Workplace Communication and Messaging

Communication and messaging components provide the end user with the ability to communicate with colleagues and external contacts using a variety of real-time (calling or videoconferencing), near-real-time (chat or instant messaging) and asynchronous (email) communication services.

Communication and messaging components include:

- **Email:** This provides the means for transactional and high-volume internal and external communication to large audiences of people.

- **Chat and messaging:** These enable near-real-time and asynchronous communication as either one-to-one chats or group-based channels and group messaging, including file sharing on mobile and desktop computers.

- **Videoconferencing:** This enables individuals or groups in different locations to hold face-to-face meetings, discussions, or presentations in real time using video and audio communication.

- **Telephony, calling and unified communications as a service (UCaaS):** These enable users to make voice and video calls, as well as to use features like call recording and voicemail. Telephony services must also integrate with dedicated phone systems for comprehensive call-routing capabilities, contact center scenarios and complex communication scenarios.

- **Contact center and contact center as a service (CCaaS):** An on-premises, cloud or hybrid solution that provides organizations with the tools and infrastructure needed to establish and operate a contact center for customer support and customer or client communication.

Communication and messaging components allow the end user to communicate and collaborate with colleagues and customers using a variety of communication types and technologies, irrespective of their location or device type.

Example Technologies

- Microsoft Exchange Online

- Google Mail

- Microsoft Viva Engage

- Microsoft Teams

- Cisco Webex

- Zoom

Key Characteristics

- Composed of traditional and modern communications capabilities (email and chat/voice).

- Enables chat, voice and video calling via a single interface.

- Enables equitable working in both remote and in-office locations.

- Seamlessly connects with meeting room and on-desk calling and conferencing equipment.

- Integrates with core collaboration (Teams, Slack), content management (SharePoint, Google Drive, Box) and other business apps and services (CRM, ERP, HR systems).

Related Research

- [4 Steps for a Successful Migration to CCaaS](#)

- [The Top 5 Criteria for Selecting Cloud Phone Solutions](#)

- [Solution Path for Migrating to UCaaS Solutions](#)

- [How and When to Use a Contact Center in Microsoft Teams](#)

- [How to Optimize Hybrid Meetings for Extra-Large Meeting Spaces](#)

- [Hybrid Meetings: Top 10 Questions and Answers](#)

User Devices and Endpoints

The user device and endpoint components focus on providing the ability to manage physical and virtual desktop infrastructure (VDI), mobile devices, and desktop software applications using modern device management approaches.

Device and endpoint components include:

- **Desktop**: Location-agnostic provisioning and management of Windows, macOS and Linux desktops from a single unified platform.

- **Mobile**: Provision and management of corporate Android, iOS and iPadOS devices from a single unified platform. Enablement of secure access to corporate applications and data from end users' personal devices.

- **Traditional VDI and desktop as a service (DaaS)**: Provision of device- and location-agnostic access to virtualized applications and desktops. This transformative capability supports "bring your own PC" (BYOPC), remote/offshore/seasonal workers, business continuity, disaster recovery, high-security use cases, and applications with high CPU and memory requirements.

- **Continuous endpoint engineering (CEE)**: An agile approach to application, device and operating system life cycle management, including patching.

- **Application life cycle management**: Capabilities to deploy modern productivity apps and tools on the desktops and devices where end users will interact. Services for self-service application delivery should be included.

These components should support employee enablement by offering a range of devices and a frictionless experience that can be tailored to employees' needs, while providing secure access to applications, corporate data and productivity tools from any location.

Example Technologies

- Endpoint management:

    - Microsoft Intune

    - VMware Workspace ONE

    - Ivanti Neurons for UEM (unified endpoint management)

    - Jamf Pro

- Productivity applications:

    - Microsoft 365

    - Google Docs

- DaaS:

    - Microsoft Azure Virtual Desktop

    - Amazon WorkSpaces

    - ATSG Desktop as a Service

- Traditional VDI:

    - Citrix Virtual Apps and Desktops

    - VMware Horizon

    - Parallels Remote Application Server

Key Characteristics

- Provision of a consistent and scalable desktop environment that is agnostic of location.

- A variety of desktop and device types to suit all work styles and requirements. Traditionally, this would include laptops for remote workers, and DaaS/VDI for more controlled scenarios and information workers.

- Devices, endpoints and their associated applications are managed using modern device management solutions.

- Principles of continuous endpoint engineering should be promoted and adopted into device management processes.

- Should have the capabilities for user self-service and automated application life cycle management.

Related Research

- [Joined, Hybrid Joined or Registered? Assessing Device Join Options in Microsoft Entra ID (Azure AD)](#)

- [Steps for Successful Device Management Tool Migration](#)

- [The Top 10 Gotchas of Microsoft Intune](#)

- [What to Do (and Avoid) When Implementing Azure Virtual Desktop](#)

- [Key Insights for Planning and Deploying a Windows 11 Upgrade](#)

Workplace Automation

The workplace automation components provide low-code and citizen development capabilities for end users to automate their workplace processes and any repeatable or laborious manual processes in order to improve efficiency. These business workflow process capabilities must be integrated into the productivity applications but also integrate with the wider digital workplace services. They must support emerging technologies such as GenAI and device management automation.

Workplace automation components include:

- **Low-code applications**: There should be an easy-to-use interface and design surface for developing low-code apps. Capabilities should enable a rapid application development process to achieve success quickly. The resulting applications must be compatible with desktop and mobile devices.

- **Workflow automation:** Users must be able to rapidly create and deploy automated workflows with minimal manual coding or intervention from IT staff. These workflows should be accessible to a broader range of users and accelerate the development and implementation of business processes.

Example Technologies

- Microsoft Power Platform

- OutSystems

- Mendix

Key Characteristics

- A user-friendly development environment that does not require significant developer skills but caters for varying levels of technical expertise.

- Provision of a means of rapid application and workflow development to enable faster application deployment.

- Integration with the wider digital workplace suite, with built-in connectors to simplify connection to multiple data sources.

- Provision of a simple way to automate repetitive tasks, allowing users and citizen developers to automate manual processes and reduce human error.

- Capability to build a central catalog of shared reusable components, templates and modules for consistency and accelerated development.

- Scalability to handle varying data loads, user volumes and complexity of business logic.

- Support for building applications and processes that are compatible across desktop and mobile clients.

- Integration with emerging technologies such as GenAI and machine learning to aid the end user and reduce the learning curve for efficient building of applications and workflows.

Related Research

- How to Replace SharePoint Workflows With Power Automate Cloud Flows

- 30 Best Practices for Governing Microsoft Power Apps and Power Automate

- 8 Best Practices for Successful Low-Code Application Platform Adoption

- Assessing Generative AI and ChatGPT Capabilities for Low-Code Application Development

Knowledge Management

Knowledge management (KM) ensures that knowledge and expertise is available and accessible when and where it is needed. KM organizes explicit knowledge that has been captured in an external, persistent form, such as a knowledge base (KB), as well as tacit knowledge that exists only in someone's head. Emerging GenAI capabilities are reducing the effort necessary to create and capture knowledge, but cannot replace human subject matter experts (SMEs) and knowledge managers.

KM is a technology-enabled discipline, rather than a technology in and of itself. KM programs and their supporting tools and platforms combine aspects of all three main components in Figure 1, and must support five fundamental capabilities:

- **Converse:** Sharing knowledge and know-how is the entire purpose of KM. Conversation, mentoring, observation and joint practice are among the most effective ways to transfer knowledge from one person to another. These interactions are also key to refining and extending existing knowledge, as well as generating new ideas and approaches.

- **Capture:** Capturing expertise in some durable, external form is an essential function of KM. Capture preserves expertise and makes it available even when the source of the expertise is unavailable.

- **Curate:** Knowledge is not static. KM content must be edited, organized, fleshed out, updated and eventually retired. Both SME and end-user input should be captured as part of the knowledge curation process.

- **Circulate:** Once knowledge has been captured and curated, it must be findable and accessible if it is to be of value. In addition to being discoverable and available via search and navigation, content should be proactively disseminated to interested parties.

- **Search and indexing:** Capabilities to access, retrieve and aggregate information using a single interface from disparate sources, such as databases, content management systems and email servers. Enterprise search capabilities should make use of recent innovations in LLMs and retrieval-augmented generation. These should enable users to type in natural language queries, rather than simple keyword searches, and obtain full answers to their queries, rather than just a list of files and content returned as search results.

Example Technologies

- Bloomfire Knowledge Management System

- Glean Knowledge Management

- KMS Lighthouse Knowledge Portal

- Microsoft Viva Topics

- Mindbreeze InSpire

Key Characteristics

- Contributing to, and accessing, knowledge resources should not require the user to leave their current context, such as the application they are using, but should be possible within the flow of work.

- A knowledge repository of records for each domain is essential, but there does not need to be a single, common repository for all KM assets. KM content should be managed closest to where it is used and be made accessible across the organization.

- Knowledge assets are created and organized according to a content standard defined by the organization. The content standard is implemented within templates that knowledge contributors use to author knowledge artifacts.

- Effective enterprise search is key to KM and should provide centralized access to knowledge assets, regardless of where they reside.

- Knowledge cohorts and communities of practice are central features of a KM program. They promote the transfer of tacit knowledge and the creation of knowledge networks across the organization.

- KM activities must be resourced and incentivized as part of regular job duties, rather than as a general, informal expectation.

- KM mechanisms must be aligned with measurable business goals and outcomes, with both qualitative and quantitative metrics being collected and analyzed.

Related Research

- Solution Path for Knowledge Management

- How to Create, Organize and Maintain a Knowledge Base

- Prompt Engineering With Enterprise Information for LLMs and GenAI

- Guidance for Developing a Knowledge Management Strategy

Business Applications

The focus here is integration and the need to have business applications that connect seamlessly with wider end-user productivity components. These integrations must utilize open and standards-based approaches. Proprietary or customized integrations should be avoided to reduce cost and complexity.

Components should include:

- **Employee communication portals and intranets** for corporate communications and dissemination of information to the workforce, via email, mobile app push notification or integration with other corporate collaboration tools.

- **Line-of-business applications, such as CRM and ERP applications,** to enable an interface to these systems without leaving the context of the primary collaboration solution. There should be message and push notification integration with these systems as a means of notifying users of important business process changes and tasks that require their attention.

All these capabilities must have integrations and touchpoints with the end-user productivity capabilities. They must be connected via an integration framework to avoid context switching for the user when accessing these services.

Key Characteristics

- Integration capabilities with existing core productivity services, such as collaboration, communication and content management solutions.

- Specific business and process capabilities beyond core productivity services to enable users to complete their tasks and workloads using the most appropriate tool.

- Self-service capability, in most cases, without the need for IT intervention or usage support. This could include services such as HR portals, self-service business intelligence, and other subscription services, such as learning management systems.

- All these services must be connected to centralized people and user profile data for master people data management and a unified identity for authentication and single sign-on.

Related Research

- Quick Answer: Should Companies Use Microsoft Viva or a Packaged Solution for Their Intranet?

- Improve CRM and Customer Data With Master Data Management

- Implementing the Technical Architecture for Master Data Management

Core Operations

The core operations component must comprise the foundational services required to support all the other components above them.

These components should include:

- **Identity and access management**: Including capabilities for authorization and modern authentication services, user profile management and identity federation across multiple services.

- **Security and compliance**: Services for data and content classification, encryption and DLP. These services must also include capabilities for threat detection and monitoring to identify risky user behaviors.

- **Governance and administration**: Services to provide governance and oversight via a set of policies, procedures and standards. Included must be role-based access control models, end-user guidance and training, data life cycle management capabilities, and system configuration management.

- **Service management**: A governance function that oversees all aspects of service management. There should be a product team, a governance group and overall platform support processes, including change management and business continuity planning.

- **Analytics and insights**: These should be provided via mechanisms for usage reporting, digital experience monitoring (DEX), user productivity measures (qualitative and quantitative), and collaboration pattern recognition (using a combination of technical, qualitative and quantitative metrics). Analytics and insights must be underpinned by a clear set of key performance indicators specifically designed to measure and understand digital workplace adoption and end-user experience.

Example Technologies

- **Identity and access management**: Microsoft Entra

- **Security and compliance**: Microsoft Purview/Microsoft Defender

- **Service management**: BMC Helix ITSM, ServiceNow IT Service Management, ManageEngine ServiceDesk Plus

- **Analytics and insights**: Dynatrace Digital Experience, Netwrix Enterprise Auditor, Splunk Observability Cloud

Key Characteristics

- Identity and access management, including authorization and authentication services, user profile management, and identity federation for integrated services.

- Security and compliance services for data classification, encryption and DLP.

- Governance and administrative oversight via a set of policies, procedures and standards. These must include role-based access control models, end-user guidance and training, data/content life cycle management capabilities, and system configuration management.

- Service management and governance functions that oversee all aspects of service management. There should be a product team, a governance group and overall platform support processes, including change/release/incident management.

- Analytics and insights via mechanisms for usage reporting, DEX, user productivity measures (qualitative and quantitative), collaboration pattern recognition (using a combination of technical, qualitative and quantitative measures), and security/governance reporting and alerts.

Related Research

- Assessing Records Management Capabilities in Microsoft 365

- Assessing Workspace Governance and Life Cycle Controls in Microsoft 365

- Establish a Product Team to Maximize Value From Microsoft 365

- Solution Path for Implementing Microsoft 365 Governance

- Modern Approaches to Identity Governance and Administration Role Modeling

- Guidance for Identity Governance and Administration

Key Architecture Principles and Patterns

The following architecture principles and patterns apply to the digital workplace:

- **User-centric design:** Prioritize the needs, preferences and experiences of the users who interact with the digital workplace tools, platforms and services within an organization. Place the user at the center of the architecture, with the aim of creating digital environments that are intuitive, efficient and enjoyable to use.

- **Collaboration and communication:** The central purpose of the digital workplace is to improve digital dexterity by connecting people, information and business processes. Building capabilities that facilitate frictionless communication and collaboration will enable users to communicate and work with colleagues irrespective of their location.

- **Scalability and flexibility:** Designing components that enable flexibility and growth allows the architecture to easily accommodate changes in the volume of users, data, and shifting application requirements. This adaptability ensures that the digital workplace can support the organization's growth without requiring a complete overhaul.

- **Integration, composability and interoperability:** Ensuring that productivity components are built to support integration and composability using a standards-based approach guarantees that the task of adding new components or expanding the digital workplace is manageable and sustainable. This must also take into account architectures that are either "cloud first" or a combination of cloud and hybrid on-premises/platform as a service (PaaS) solutions.

- **Readiness for emerging technology:** Planning and consideration of how emerging technologies such as GenAI will impact the organization will ensure you are ready to respond effectively as these technologies develop. These emerging technologies are potentially disruptive to traditional work patterns, but have significant positive transformative potential.

- **Security and compliance:** A foundation of security and compliance for any digital workplace architecture will help ensure the platform is protected from unauthorized access, breaches and data loss. Many industries and regions have strict regulations governing the handling of data and information security (for example, the EU's General Data Protection Regulation [GDPR], the U.S. Health Insurance Portability and Accountability Act [HIPAA] and the U.S. Sarbanes-Oxley Act [SOX]), so implementing effective data handling and data life cycle management controls and procedures is critical.

Key Architecture Recommendations

- **Select a single-vendor product suite** to provide a foundation for most of your digital workplace requirements. Today, this means choosing between Microsoft or Google. Supplement the suite with other products where functionality is absent from the chosen suite or is insufficient to meet the needs of a specific industry, domain or situation.

- **Align the reference architecture with your organization's strategic business goals,** ensuring that the technology and services are complementary and fit for purpose.

- **Build from a user-centric perspective,** centering capability and utility on user enablement and improved productivity. Prioritize the creation of digital workplace environments that are intuitive, efficient and enjoyable to use.

- **Ensure the architecture is scalable and flexible,** with scope for future development, while also being optimized for cost. It must be built to meet current and future demands and the changing needs of the organization.

- **Build with an integration and interoperability mindset** to ensure there is an efficient flow of processes and data throughout the systems. Integration between key productivity components and wider business services is crucial to realize productivity gains and enhance collaboration. Evaluate organization- or industry-specific vertical requirements and whether these are best served by cloud, on-premises or hybrid solutions.

- **Implement a strong foundation of security, compliance, and governance controls and processes.** This must include the appropriate level of data protection and regulatory compliance controls to ensure the organization manages risk effectively.

Recommended by the Authors

Some documents may not be available as part of your current Gartner subscription.

Solution Path for Document Management in Microsoft 365

Near-Time Collaboration Tools Reshape How Teams Work Together

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Solution Path for Implementing Microsoft 365 Governance