

Liferay DXP 7.4

Features Overview

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Foundation

Successful digital businesses require platforms that are built on solid, reliable IT. Liferay DXP delivers features like modular architecture, a powerful search engine and advanced tools for testing and upgrades.

Integration and Interoperability

Transform the way your business is run by using a platform can evolve alongside your strategy. Liferay's incredibly flexible architecture empowers businesses to bring systems and data together on one platform.

Integration Framework	Liferay DXP is a central presentation layer platform for integrating content and services from back end or legacy applications. Liferay DXP supports multiple methods to integrate, including SOAP, REST, GraphQL, RSS, as well as proprietary APIs.
Frameworks Support	Support for popular JavaScript frameworks such as Angular, Vue.js, React and modern JavaScript workflows are included out-of-the-box (OOTB). Java frameworks such as JSF, SpringMVC, Vaadin are supported.
Custom Fields	Administrators can customize, edit, add and change user attributes (name, company, date or any other information that needs to be tracked or logged by your system) directly from Liferay, without needing to modify their database. This support extends to Pages, Web Content, Blogs Entries, Documents and its folders, images and its folders, Segments, bookmarks and its folders, forum messages, calendar events and wiki pages. Liferay also offers a framework so that developers can leverage this functionality in their custom applications to support custom fields for their own entities.
Modularity	<p>Liferay provides a highly modular architecture that allows for greater extensibility, stability and flexibility. Developers can enjoy an elegant development model based on OSGi standards. Modularity leads to many benefits such as:</p> <ul style="list-style-type: none">• Greater flexibility including the ability to remove unused modules.• Faster implementation of new features with users getting new modules as they're ready rather than at the next GA release from Liferay.• Reduced complexity with greater stability since updates and bug fixes are delivered independently and routinely.• Quicker deployment since modules can be installed, uninstalled, started or updated all while running Liferay DXP.

Remote Apps	Developers can easily register remote JS Apps which can interact with Liferay services & styling. Once registered each Remote App can be deployed via an automatically generated widget and can be configured to be rendered within an iFrame in the widget, or as a Web Component, which is rendered via custom HTML Elements within the widget.
Click-to-Chat	Liferay includes out-of-the-box integration to 10 popular Click-to-Chat providers. Administrators configure Click-to-Chat by providing the appropriate Provider ID / API key details. If needed, different providers can be configured for each site and/or virtual instance. A subscription is required from a provider to use this feature - check the providers' documentation for details
DocuSign	Liferay includes out-of-the-box integration to DocuSign to support the use of Electronic Signature processes. A subscription to DocuSign is required to use this feature.

Platform Services

Liferay DXP gives businesses the ability to manage backend systems through powerful administration interface tools along with a flexible, modular architecture that enables agile growth with user needs. Key functionality includes site administration, identity management, search and more.

Multitenancy and Virtual Hosting	Multiple virtual instances serving different groups of users with different domains can be administered in a single instance of Liferay DXP, leading to cost savings and operational efficiency for your organization. Enterprises have the ability to organize users by business-defined categories such as departments, geographies or offices, as well as by cross-departmental teams and workgroups. Each organization and site can inherit or define its own permissions and administer user, group and role management for the various applications it chooses to include. A single instance can be used to create many websites quickly to create hosted websites within one Liferay deployment and each clone can have its own unique URL, custom theme and design. For example, a single deployment could host www.companyA.com and www.companyB.com with completely different themes, pages and applications.
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High Availability and Scalability	Maximize uptime while updating your clustered environment with rolling restarts, support for blue-green deployment and cloud deployment through Liferay DXP Cloud.
REST APIs	Out-of-the-box APIs allow connections to assets, cache, comments, data handlers, file storage, geolocation, membership policies, message bus, permissions, recycle bin, scheduler, scripting, search, upgrade and workflow.
Headless APIs	Liferay's new Headless API families, which are OpenAPI compliant and provide GraphQL Endpoints, offer greater flexibility over traditional REST APIs. Additionally a far greater array of Liferay functionality is exposed, allowing for not just content retrieval but full CRUD operations. The API Explorer UI fully documents all Endpoints and allows APIs to be tested. New Page APIs provide access to Pages, in-line content in Fragments, Experiences, and new User APIs provide CRUD access to Users, Roles, Organizations, Accounts, User Groups, and to configure permissions
Search Administration	Easily manage and control indexing and other search engine features.
Simplified UI	Liferay DXP simplifies the user experience of internal, external and channel websites —notably those that allow users to login for personalized services or views and those that require a workflow approval process to update content and integrate or aggregate multiple existing services. Liferay DXP provides a presentation layer for integrating all enterprise systems into a single easy-to-use interface for end users.
Quick Configuration	A fast, responsive interface makes Liferay DXP extremely easy and enjoyable to use for everyone in your organization. Typically time-consuming tasks such as altering a page layout, adding new applications and content and changing the look and feel can all be done in a couple of clicks without ever refreshing the page.
Product Menu	Administrators and registered users have access to administrative and personal applications from the Product Menu, leaving the screen real estate available for site navigation and page design.

Site Menu	Administrators and registered users have access to administrative functions for the currently selected site, from the pop-out Site Menu on the left-hand side of the screen.
Global Menu	The global menu provides a centralized location for all system-wide administration functions, and Application administration. Provided as a mega-menu, this provides a clean separation of Site Administration (accessed through the Product Menu) and other administration functions.
Applications Bar	All the tools for managing the current page are now in a bar at the top of the screen - for example: Editing the page, Configuring it, adding content and applications and so on. Options vary per release and for Widget and Content Pages.
Personal Menu	The Personal Menu provides access for the current user to perform actions such as changing Sites, managing their Profile, monitoring Notifications, and signing out.
Site Administration	<p>Users can create and manage sites and their respective audiences. Each site gets its own set of pages, content management system, shared calendar and permissions. Users belonging to multiple communities can easily navigate between sites. Site settings allow site administrators to change the look and feel with one click, manage site pages, insert JavaScript and metadata, set friendly URLs, and more.</p> <p>One-click page and site creation are possible: web structures and templates allow common web layouts to be predefined and saved for future web pages. With one-click page creation, users can create a new page and immediately begin adding content to the page layout, allowing web pages to be set up within minutes without any developer support required. Users can also create Sites with sets of predefined pages configured to their needs. These site templates can be dynamic, allowing all changes to the parent template to be inherited by associated children sites.</p>

Auditing	To help administrators monitor user activity, Liferay DXP provides an Auditing feature which allows administrators to track and manage user activity within the platform. Optionally Audit information can be included in system logs alongside error and warning messages to enable Administrators to determine which request or instance the audit output belongs to.
Clustering and Performance Monitoring	Liferay DXP supports clustering at any combination of tiers (presentation, service, business logic and database), advanced caching and performance monitoring support (JMX, Java profiling and more).
Single Page Applications	Users experience faster loading and greater performance on the Liferay platform through Single Page Applications, a technology that provides dynamic and responsive web experiences by taking only the parts of a page that need to be loaded rather than reloading the entire page. This can be achieved in Liferay DXP through Senna.js, a SPA engine.
Development Standards and Technologies	AJAX, iCalendar, Microformat, JSR-362 (Portlet 3.0), JSR-371 (MVC1.0), JSR-344 (JSF 2.2), Spring 3.0, CMIS 1.0/1.1, Hibernate collection of projects, OSGi Core 6.0 and SAML 2.0.
Gogo Shell	Interact with and manage Liferay DXP's module framework through a built-in Gogo shell interface.

Identity Management and Access Control

Liferay DXP gives businesses the ability to connect backend systems through integration along with a flexible, modular architecture that enables agile growth with user needs. Key functionality includes site administration, identity management, search and more.

Security	<p>Liferay DXP is thoroughly tested for security issues through White Hat Security, a leading provider of application risk assessment and management services. This independent third-party security audit means that Liferay DXP has successfully undergone rigorous testing based on the most widely accepted and comprehensive methods, and that the platform meets customer requirements for addressing security issues in an effective and proactive manner. In addition, Liferay DXP is developed according to secure coding best practices and guidelines such as the OWASP Top 10 and the CWE/SANS Top 25. Our continuous security testing process includes regular security code reviews, penetration testing by ethical hacking firms, continuous white and black box security scans from third-party firms and continuous vulnerability monitoring of third-party libraries included in Liferay DXP. Whenever new potential security vulnerabilities are found by Liferay's security team, customers are notified and provided with a security update or fix pack.</p>
Identity Management	<p>Liferay DXP supports LDAP and provides sign-on (SSO) integration capabilities through the OpenID Connect and SAML 2.0 standards to connect with solutions and services like OpenAM, PingFederate, Google, PingOne, Okta, MS Azure AD, Oracle Identity Cloud. The SAML 2.0 connector also allows Liferay DXP to act as a SAML 2.0 Identity Provider server to authenticate all applications integrated.</p> <p>Token Based SSO is also supported for integrating other kinds of SSO solutions, for example: SiteMinder, Kerberos etc, through cookie/request/header or session parameters.</p>

Access Control	<p>The CORS (Cross-Origin Resource Sharing) system settings provide a way to configure CORS headers for Liferay services.</p> <p>OAuth 2 is the de facto standard for access delegation, for providing authorization between systems. OAuth 2 allows your application to access protected data inside your platform.</p> <p>Registered OAuth 2.0 Applications can be configured as Trusted Applications, allow users to have their device remembered, and have all device authorizations removed with a single click.</p>
Multi-factor Authentication	<p>Multi-factor authentication (MFA) is an architectural approach to accessing resources sequentially through multiple authentication verifiers. Liferay includes support for email-based one-time passwords, time-based one-time passwords and APIs to enable the development of custom factors. Support is also provided for FIDO 2.0 hardware-based authentication devices such as Fingerprint readers, Cameras, and dedicated FIDO 2.0 security keys.</p>
Service Access Policies	<p>Define which services or service methods can be invoked remotely with an additional layer of web service security.</p>
User Management	<p>Create and manage users, organizations, user groups, roles and password policies. View all of the live portal sessions of your users.</p>
Data Protection	<p>Data protection tools in Liferay DXP help companies address GDPR and other privacy regulations and maintain control over how their platform manages user data. Companies can erase a user's personal data and export a user's personal data in a machine-readable format upon request. For data erasure, administrators can review content that potentially contains personal information and edit or delete as needed through a simple interface. Both tools include APIs for third-party apps to implement this feature or override the default behavior for out-of-the-box apps. The management dashboard allows for simplified bulk deletion, anonymization, filtering and scoping abilities for greater context in personal data review. Administrators are informed of which applications will automatically delete or anonymize data during the auto-anonymization process.</p>

Experiences

Liferay DXP is designed to support personalized experiences across digital touchpoints including web, mobile and connected devices. Features around business productivity also help companies create useful experiences for employees and partners, making the platform a solid foundation for almost any project. Create consistent, personalized experiences quickly and easily.

Content Management

Content management features provide support for creating and managing structured web content and digital assets for developers and business users, including a modern UI, content authoring, geolocation, staging tools and others.

Liferay CMS	The main interface for Liferay's integrated web publishing system allows users to create, edit and publish content as well as take advantage of reusable Web Content templates and structures. These structures and templates enable users to quickly build pages and websites while maintaining a common look and feel across an entire site. It also allows for one-click changes in layout and one-click creation of full pages. There is a built-in workflow, article versioning, search and metadata.
Structured Content	Manage and create different content data models to make your use-case specific content management system a reality. Uses a consistent forms-builder experience shared across Forms, Web Content, and Documents.
Display Page Templates	Create Display Page Templates and assign these by default, or manually, to different types of content. Display Page Templates provide a default presentation for all content assigned to them, including a friendly URL, allowing them to be displayed without needing to create a page for each content item. Additionally Display Page Templates can be created for Categories to provide enhanced support for content-heavy sites and applications.
Content Metadata	Assign metadata to Web Content such as Display, Expire and Review dates, assign Friendly URLs for use with Display Page Templates, assign Categories and/or Tags, set default Templates and Display Page Templates, and so on.

Information Templates	Create Freemarker-based templates for Web Content, Documents, Blogs, Categories, and Assets. Templates can be mapped to Fragments to support sophisticated and consistent presentation of information.
Content Previews	Easily preview created content within an associated display page, within a page before publication in a fragment and in draft form within a Widget page.
WYSIWYG Editor	The default editor for Liferay is based on CKEditor. The editor aims to improve the experience when creating new content in Liferay DXP. It includes the ability to preview source written in HTML as it is being typed live, which makes it simple to add new content using only the source code.
Web Content Diffs	Web content can be compared when the content is being processed through a workflow. This makes it easier for the content approver to review the changes before approving them.
Collections	Create, edit and manage collections of content in “sets” for display in the Collection Display fragment, via Collection Pages or through the Asset Publisher widget. Configured collections can be reused as required.
Info Framework	Info Framework facilitates building composable and extensible applications to retrieve, process or display information (not just content). One feature enables developers to create Collection Providers to generate lists of items for display and rendering purposes which can be used in Asset Publisher. Another usage is to allow mapping any item to the Content Display Fragment. Also supports Field mapping in the page editor, automatic form generation for Web Content Translation and display of items in the Collection Display Fragment.
Collection Providers	Built using the Info Framework, Collection Providers are provided for Highest Rated Content, Most Viewed Content, Related Assets and Recent Content. Developers can add pre-filtering options to their Collection Providers to enable the same collection to be used multiple times. Page authors can configure the collection using the supplied filtering options. Collection Providers are automatically created for any Liferay Object (see page 22)

Related Items Collection Providers	A special type of Collection Provider which is available when an item or collection is already displayed - for example Related Assets for an item on a Display Page can now be displayed in a Collection Display Fragment.
Web Content Prioritization	Create a ranking of assets for publishing.
Web Content Display	Publishes any piece of web content created within Liferay to a page. Web Content Display allows the same content article to be published any number of times, optionally using different display templates, across pages and sites.
Asset Publisher	Allows users to specify assets that are related to the asset they are creating. For example, when creating a new web content, users can specify that the content is related to a document, blog post, forum post or any other asset. When someone views that content, the related assets are also shown so the user can look for more information.
Similar Results	When viewing an asset like a blog or document, the Similar Results widget shows a list of relevant assets based on the similarity of specified fields like title or content.
Tag Cloud	Displays a cloud of tags from some set of assets in a site.
Dynamic Tagging	Search can be used to look inside content published within the platform, but occasionally it is not enough to help users find their desired content. Dynamic Tagging is available in Liferay, allowing content creators to define keywords associated with their content. Users can add keyword tags to web content, documents, message boards and more, simplifying search and enabling powerful features like the Asset Publisher.

Modern UI	<p>Liferay supports modern UI frameworks and Single Page Applications (SPAs). Users experience faster loading and greater performance on the Liferay platform through SPAs, a technology that provides dynamic and responsive web experiences by taking only the parts of a page that need to be loaded rather than reloading the entire page. This can be achieved in Liferay DXP through Senna.js, a SPA engine.</p> <p>Support for third-party UI frameworks include Twitter Bootstrap, JQuery, ReactJS, AngularJS, Vaadin and more.</p>
Enterprise DAM	<p>Manage documents, video, audio, images and other media types in a unified repository. Allow groups to store, tag, lock and search for assets, use them on site pages or download them for use offline. For more information about digital asset management, please refer to page 29.</p>
Auto-Tagging	<p>Leverages third-party machine learning services to provide personalized experiences and improve the findability of assets by automatically adding tags to images and documents upon upload.</p> <p>Features include:</p> <ul style="list-style-type: none"> • Image Auto-Tagging: Tag providers available for images are TensorFlow, Google Cloud Vision and Microsoft Cognitive. • Web Content/Document Auto-Tagging: Tag providers are OpenNLP and Google Natural Language. • Auto-Tagging API: Tag any asset with any service, for your use case by leveraging an API built for extending auto-tagging functionality.
Search	<p>Search for documents, video, audio, images and other media types based on file names, tags, metadata and the file's text content.</p>
Content Dashboard & Content Audit Tool	<p>Streamline the content audit process and minimize the effort of finding gaps in company's content strategy execution. Content Dashboard is a one-stop-place where content authors will be able to access all Web Contents and Documents, not only for a given site, but for all the sites and asset libraries in a Liferay instance. It includes the Content Audit Tool to make it easier for content teams to run content audits.</p>

Taxonomies	<p>Create taxonomies through the use of tags, vocabulary and categories to classify and organize content within Liferay DXP. Foster systematic categorization with out-of-the-box Global Vocabularies. Tag web content, documents, message board threads and more to dynamically share content with other users. Faceted search leverages tags to allow users to filter results by specific criteria across the platform.</p> <p>Foster systematic categorization with out-of-the-box Global Vocabularies. Internal vocabularies and categories are not displayed to end-users but are used for administration purposes within to categorize content for the Content Audit tool.</p>
Role Based Content Delivery	<p>Liferay DXP allows for multiple user types to access a single URL and access a unique page view depending on the user's role, group, organization or personal preferences. Administrator controlled and user customized, Liferay DXP provides a central platform for determining enterprise content policy, including who can edit and publish content, files, communities, files and applications.</p>
Site Content Sharing	<p>Gives you the capability to share various content pieces between child and parent sites. As the administrator of a child site, you are able to use all of the structures, templates, categories, application display templates and more from any of your parent sites that allows for it.</p>
Site Map	<p>Displays a structured directory of links to all pages. The Site Map can be used to navigate directly to any page on the site. It can be configured to display the entire site or a sub-section of pages. This site map is automatically generated and the hierarchy can be changed with drag-and-drop allowing administrators to quickly rearrange pages within the site.</p>
Breadcrumbs	<p>Displays a trail of "parent" pages for the current page. The Breadcrumb app can be placed on public pages as a navigational aid when using Liferay to publish websites.</p>
Navigation	<p>Allows for dynamic generation of navigation. Displays and sorts site content based on page structure, tags and categories. Nine Application Display Styles can be used to enhance your navigation's look.</p>

File Selector	A modern UI for file selection leverages Liferay's core navigation, search and filtering capabilities. It displays a breadcrumb of documents, images, and other files, with pagination implemented to accommodate folders with long lists of files and assets. In Liferay DXP, the File Selector has been updated with a new UI that makes use of the Documents and Media navigation and search capabilities. The file selector allows users to perform advanced operations such as allowing creating folders from the file selector to better organize content or fill the metadata of the files uploaded.
Recycle Bin	All deleted content goes in a Recycle Bin that allows recovery in case of accidental deletion. The Recycle Bin supports full search as well as browsing within deleted folders.
Nested Layouts	Nested page layouts are possible through simple drag and drop.
Multi-language Support	International or multilingual organizations get out of the box support for languages. Users can toggle between different language settings with just one click. You can also easily add other languages. Right to left language support is fully functional out of the box without the need to install a separate app.
Localization	Create localized versions of Sites, Content Pages and Web Content for specific regions. Email notifications can also be localized. Export/Import translations for Web Content and Content Pages using the industry standard XLIFF as well as using a dedicated translation experience with integration with workflow so it is possible to delegate this process to external agencies or freelancers. Accelerate the automatic translation of web contents and content pages using integration with Google Translate. Marketers can determine which hreflang tags should be generated to ensure that only pages fully translated into a given language have an equivalent hreflang tag generated.
Web Content Folders Workflow	Give users the ability to subscribe to specific folders and content types and now also provides the ability to set up separate workflow processes per folder and content types. Web Content Folders now also have the ability to restrict specific web content structures to a specific folder.

Staging	<p>Liferay allows multiple teams to work on several variations of a site simultaneously and schedule publication dates for each. For example, three different teams can work on sites for Halloween, Thanksgiving and Christmas and schedule their variation to publish at different times. Enhanced staging includes automatic versioning with history, undo support at the site and page level, and preview based on scheduled publications.</p> <p>Within the online editor, pages from a live site can be edited and previewed without affecting what is seen on the public site, and then scheduled for future publishing. Users can use this same method to edit individual pages, entire communities or full websites. Liferay also allows users to “roll-back” to previous versions of pages, sites or communities.</p> <p>Staging also supports the creation of custom export configurations in order to export Site pages, and allows the Staging process to be restarted using a previous configuration, saving Administrators the time needed to recreate a prior configuration. Staging also supports publication beyond two environments to support a greater variety of requirements.</p>
Publications	<p>Use Publications to develop, track and publish instance-wide changes across Liferay DXP. Teams of users can create any number of publications which will track changes made while in Edit mode. When working on a publication, users can Review Changes, assign Permissions, Publish the changes immediately or schedule publication, and if needed Delete it entirely. When publishing conflicts can be automatically resolved, where possible, or may require manual resolution, and any publication can be reverted due to the tool maintaining a history of all published changes. Users can invite other teammates to join their publication, and can collaborate by adding comments.</p>
Export / Import / Publication Lifecycle Event Listeners	<p>Developers can write code pieces very easily to react to certain events during an export or import process. They can use this to facilitate logging or auditing or kicking off tasks after a certain event has happened.</p>

Widget Templates	Widget Templates are a way to define how built-in and custom applications display content and data. Site administrators and web designers can create, edit and share templates directly in Liferay, significantly reducing the time to develop and deploy customizations. You can change the look of individual apps without customizing the plugin. These templates allow you to fully customize the look and feel of an application without using a theme or hook, which require deployment and typically have to be upgraded between Liferay versions. In Liferay DXP, you have the ability to customize the RSS, Language, Wiki, Asset Publisher, Navigation and Breadcrumb apps and more.
Search Applications	Search Bar, Search Results and the Search Facet widgets allow for flexibility in page construction and bookmarkable pages. All of the Search Widgets support the use of Widget Templates to enable the creation of customized Search pages.
Asset Libraries	Organize Web Content, Documents, Vocabularies and Categories in dedicated libraries to reuse that content across different sites and have better-isolated control. Connect the asset libraries only to the sites where it is needed to provide access so that content authors can use the assets while creating a page, writing a blog post, and so on.
Content Performance Analytics	Integration with Liferay Analytics Cloud provides on-page reports that help users understand the content engagement level through metrics like the number of views and reads, as well as insights about the main traffic acquisition channels and keywords.

Experience Management

Empower any member of your team to build and customize web pages in order to deliver enhanced digital experiences that are tailored to your users' needs. Additionally, leverage analytics for insights on how to improve these experiences.

Themes	Themes customize the default look and feel of your Site. They allow you to define the style and visual identity of your brand or label across your whole Site. Developers can create custom Themes for maximum flexibility.
Style Books	Non-developer users can customise the look and feel of Themes by creating Style Books. Themes, including the Classic Theme provided out-of-the-box, can expose Tokens to allow style elements to be modified through the UI. Items such as Colors, Spacing, Typography, Buttons, and so on, can be modified
Fragments	Fragments are predesigned, reusable components featuring configurable styling options that are used to quickly build new pages. Fragments use inline editing to change text and images and can incorporate Liferay DXP applications for advanced functionality. Fragments can be configured to be updated to all pages when updated thanks to an automatic propagation mechanism. Fragments can be configured to be displayed or hidden from specific viewports to enable optimal UX for different devices.
Fragment Editor	Easily drag-and-drop from OOTB element/component sets to create fragments or composition of fragments.
Fragments Toolkit	CLI tool allows front-end developers to code fragments in their own code editors and upload without the need to redeploy.
Widgets (Portlets)	Reusable, drag-and-drop and configurable widgets can be used by any business users.
Widget Library	Liferay DXP provides a generous selection of OOTB widgets for different business needs that can be easily added to the page.

Liferay JS Bundle Toolkit	A JS widget creator allows non-java developers to easily create frontend apps using the latest libraries through the CLI tool.
Content Pages	Use Content Pages to create pages for structured, unstructured content, and widgets using a drag-and-drop interface. Use page fragments and content mapping to define how different types of structured web content are displayed on a page. Use the Viewport navigation to view and define the responsive behaviour of the page for mobile devices using styling options for layouts, and spacing.
Collection Pages	Use Collection Pages to group pages built with a Display Page Template. It will facilitate the administration of the pages resulting from a collection of content and their associated Display Page Template.
Page Editor	The Page Editor allows business users to visually lay out page designs and save them as reusable templates, in context of how it will appear on the live site. Within this interface, users can search through collections and add fragments to the template. Marketers can then customize content and images with a few clicks.
Widget Pages	The traditional method of creating pages through adding and configuring applications (widgets) to a page layout of columns and rows is available through Widget Pages. Depending on what the administrator allows, users can customize widget pages by adding, removing, positioning content or application attributes (e.g., zip code for weather application). These pages can be made public (published as a website with a unique friendly URL) or kept private.
Display Page Templates	Create a common template for structured web content without touching code. Use page fragments to implement the design of the page and map content sections to the web content with a few clicks. When a piece of web content is published with a display page template, it will automatically be given its own page with a unique URL, replacing the default content in the template with the newly added web content.
Master Pages	Create custom Master page layouts that can propagate to pages.

Page Templates	Create page layouts with content, sections, widgets. These types of pages are aimed at being used as Example pages or Starter pages. Page Templates can be built from scratch or inherit the design from a selected Master Page.
Navigation Menus	Menus are decoupled from page navigation in Liferay, giving business users the freedom to create custom menus for sections of the site or remove menus when desired such as on marketing landing pages. A drag-and-drop interface allows you to manage menu hierarchies and save different menu sets. Users can add Pages, URLs, Display Pages, and Sub-Menus as items in any Navigation Menu.
Mega Menu	Mega menus, and other sophisticated menu capabilities can be easily implemented, without the need to write any code, using the Dropdown fragment, which provides a dropzone into which any other fragment or widget can be deployed
Search Engine Optimization (SEO)	<p>Liferay DXP optimizes updates to site map information and other metadata so that new pages are searchable by external search engines. SPA technology provides dynamic page loading without hurting SEO.</p> <p>The redirections management application allows admins to create redirections, through the UI, to help with page rearrangements or direct users to the desired page. Admins can utilize the list of 404 errors to create new redirects before search engines penalize the sites or users start complaining about not finding what they were looking for.</p> <p>The OpenGraph support allows tailoring marketers messaging when sharing pages on social platforms. For marketers and content authors, valuable metrics on search engine traffic and best performing keywords by region are provided in the display page context. Marketers can also map multiple fields to each SEO and OpenGraph meta tag which are populated dynamically when a page is rendered.</p>
Page Analytics	Integration with Liferay Analytics Cloud helps you visualize a page list and understand performance through an aggregate view.

Page Audit	Page audit allows marketers and page builders to make a quick check of the page's compliance with best practices in terms of accessibility, search engine metadata and SEO, to ensure it is optimized for search engine indexing and visibility. It is displayed on a side panel in the view mode of the page. The feature is enabled OOTB but needs a free API Key from Google to be run.
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Segmentation and Personalization

In order to facilitate deeper personalization of digital experiences, Liferay DXP provides features for role-based content delivery, audience targeting and segmentation.

Experiences	Create different variations of a single site page and easily personalize anything on a page for different audience segments through the page editor.
Segmentation	<p>Create audience segments based on user behavior (e.g., page visited, device, last login date), user attributes (e.g., country, gender, language), social media profiles or custom fields. Target specific audiences for personalization for delivering prescriptive customer journeys (e.g., promoting products to a specific vertical or showing offers to a subset of customers). Now in Liferay CE/DXP 7.3, you can reuse existing segments and combine them with complex rules to create new audiences. In DXP, this allows marketers to mix DXP and Analytics Cloud segments to create new and more powerful criteria.</p> <p>Functionalities include:</p> <ul style="list-style-type: none"> • Creating complex rules to segment your visitors. • Targeting unauthenticated visitors based on cookies, device, URL, geolocation and locale. • Executing use case-specific segmentation rules. • Allowing advanced segmentation rules to have consistent functionality with the segmentation rules provided in Analytics Cloud. Segments will be available at the root level along with Users, Organizations, Roles and User Groups. • Managing and moving segments to different scopes. • Segmenting users based on profile and organization fields. • Combine existing DXP and Analytics Cloud segments with complex rules to create new and more flexible segmentation criteria.

Optimization	Measure the interaction of targeted user segments with your chosen content to optimize content delivery. This functionality is available through Liferay Analytics Cloud .
Role-Based Content Delivery	The Liferay platform allows multiple user types to access a single URL and a unique page view depending on the user's role, group, organization or personal preferences. Administrator-controlled and user-customized, Liferay DXP provides a central platform for determining enterprise content policy, including who can edit and publish content, files, communities and applications.
Widget Page Customization	An administrator can allow users to customize pages without affecting other users or site members. Users can customize pages by adding, removing, positioning content or application attributes. These pages can be made public (published as a website with a unique friendly URL) or kept private.
Content Recommendations	Automated personalization of content based on a user's past behavior powered by Analytics Cloud integration, with behavior-based segmentations and interest-based content recommendations.
Collections	Personalize collections for reuse across multiple pages. Easily manage segmentation targeting for collection lists.

Multichannel Support

Liferay DXP provides multichannel delivery and support for the ability to offer great experiences across various channels, devices and touchpoints. REST APIs provide further ability to integrate other methods of delivery and support a range of applications and other systems.

Headless CMS	<p>A new generation of REST and GraphQL APIs helps developers consume content from any channel they need including mobile apps, chatbots or wearables. Front-end developers are free to create a presentation layer using the technologies they commonly use (Angular, React, NodeJS, etc.), leveraging on their experience while keeping all the functionality that Liferay provides such as user management, content repository, documents and media, forms and blogs.</p> <p>Additionally, Liferay provides a toolkit that helps developers to create their own APIs, for example, for exposing services from back end or legacy applications.</p>
Mobile Experience Suite	<p>Feature and framework for defining different platform behavior based on device type with a built-in set of device definitions for most mobile device platforms (iOS, Android, etc.) and an optional device detection database for purchase.</p>
Mobile Device Rules	<p>Feature and framework for defining different platform behavior based on device type with a built-in set of device definitions for most mobile device platforms (iOS, Android, etc.) and an optional device detection database for purchase.</p>
Responsive Design	<p>Liferay DXP's CSS framework is responsively designed to work with browsers on all platforms from mobile to tablet to desktop.</p>
Mobile Device Preview	<p>Preview your content on a variety of predetermined or custom screen sizes.</p>

Adaptive Media	Adaptive Media is an application in Liferay that dynamically adjusts images to best fit the screen size of the device being used. It also offers deep control over how images are loaded and displayed, allowing companies to address performance issues across a wide variety of devices and varying network speeds between users and countries. Liferay will automatically present the most appropriately sized image based on the viewport width for images displayed in Content and Display pages, including background images. This can be overridden by authors if required.
Liferay Push	Liferay Push exposes a framework that lets developers send push notifications from the Liferay platform to native Android and iOS apps. Note that Push is deprecated in Liferay DXP 7.4.
Liferay Mobile SDK	The Liferay Mobile SDK is a framework for building native mobile apps that integrate with your different Liferay DXP instances and their portlets.

Operations

Streamline common business processes and gather information from your users with out-of-the-box features for creating forms and workflows.

Liferay Objects

Liferay Objects	Model data through the interface with no need of custom code, create customized entities that are seamless with native ones. Users can scope the data to be only accessed by the context that it should, defining where it will be deployed and displayed. Model the data by adding fields and defining its layouts to be used to add data.
Objects relationships	Users are now able to relate entities by creating object relationships. Adapting to the context of the use case, define one-to-many or many-to-many relationships between objects entries and define how they are displayed in the custom layouts.

Layouts	Users are able to create customized layouts for their applications, in that way, they can provide for their customers a unique experience of adding data.
Actions	Create actions that will be triggered by specific events as, when adding, updating and deleting entries. In that way, automate your process and avoid human mistakes.
Picklists	Define a predefined list of options to use while modeling data in Liferay Objects. Users can manage lists and use it across multiple different objects, in that way, they can guarantee consistency and avoid mistakes while modeling their data.
Gather data inside of the user context	In order to provide users the ability to gather more accurate data from their customers and employees, Liferay Objects is also integrated with Liferay Forms, using the established capabilities of Forms to gather more accurate data and adding to pages through Forms Widgets.
Display data to create experiences with Liferay Objects	By publishing an Object, they are also integrated with the Info Framework, allowing users to create experiences with its application data. Besides being able to display specific entries in pages, a Collection Provider will also be automatically created for each object, allowing users to create full flexible experiences using Fragments.
Objects APIs	By creating a custom object, DXP automatically generates a new Rest API with a set of end points. This provides a full headless experience with no code necessary to create the APIs.
Objects integration with DXP native frameworks	In order to provide the seamless experience with native capabilities from the portal, Liferay Objects is fully integrated with DXP's frameworks, being integrated with Workflow, headless, permissions, Blueprints, Search, Forms, Fragments, Assets, and Info Framework.

Forms

Design and build personalized forms to replace complex paper applications.

Forms	Design, publish and manage forms with a simple-to-use drag-and-drop interface. Instead of making users fill up a long and tiring form, break it down, improve the experience and take advantage of the multiple pages. Share with your target audience a form URL published into a standalone page. Assign your form to a workflow so it will follow a process suited to your business after user submission. Allow users and administrators to create multiple choice polls that keep track of responses. Ultimately, customize your forms to show or hide fields, only asking relevant questions to the users.
Form Rules	Create personalized forms with conditional rules using the Form Rules feature. Conditional rules allow users to introduce dynamic behavior in forms and allow personalization of the questions or fields to show/require based on how users respond on your forms. A predefined set of form rules allows for quick customizations to users' form fields, including: setting a required field, enabling fields/options, autofill selects, show and hide, jump to a page, calculations, conditional success pages and an API to create and execute customized rules for your form needs, for forms created programmatically. Define validation logic for a specific form field by creating custom messages for form validation errors. This helps improve the completion rate of your forms.
Multi-Language Support for Forms	Add a translation for each form field when building forms. Similar to creating translations for web content, the ability to add translations for form fields allows for better support globally, where common things like names, surnames and address formats vary between countries.
Fields and Properties	Field types included in the default form fields including text, file upload, numeric, password, grid, boolean and search location fields. The ability to create form field sets, by grouping fields together and repeating that group of fields help speed up the creation of long forms where repeated inputs may be necessary. Fields can be hidden to support use cases where data needs to be defined by administrators but not modified by form submitters. Confirmation options can be added for text fields, Masks can be created for numeric fields, Validation is available for many field types, including Dates. An API also allows users to create new customized field types, with a provided Blade template and documentation.

Forms Structure	Structuring your forms is easy with the drag-and-drop interface. Users can easily layout their form fields on a page and better design their form layouts through the intuitive interface. Users can also configure a URL for redirects after a form submission and standalone forms can have URLs independent of the default site navigation.
Validation	Users can define validation logic for a specific form field by creating custom messages for form validation errors, which can help improve the completion rate of your forms.
Field Library	Liferay DXP comes with a default predefined library of form fields, as well as capabilities that help you build a library of fields so that users can easily begin building forms they need by reusing preset fields. The set can be arranged once and deployed across a variety of situations for the business.
Data Provider Integration	Integrate external web services using a Data Provider to apply to fields and benefit from live data. You can pre-populate fields with data from external services and import and export Data Provider definitions.
Entries Management	Liferay DXP provides functionality for improving the end user experience upon form completion. End users can receive email notifications after a form entry and export entries into different formats: CSV, XML, and XLS. Entries have workflow integration provided, so that they can also go through a workflow process after submission.
Form Entries Data Storage	Save the data you gather with your forms. Use our StorageAdapter API to give more flexibility to your data management and store the data inside Liferay Database or externally depending on the use case.
Data Engine APIs	Data engine APIs to help IT build more flexible business applications. These APIs can be used to execute CRUD operations on data definitions and make it possible for developers to quickly assemble business applications that can scale with flexibility.
Forms Reports with Analytics Cloud	Forms reports detail the number of views, submissions, failed submissions, abandonment and completion time, user information and device usage.

Forms Reports	A built-in summary report of the answers received in forms, allowing users to not only see the data collected, but also have an overall analysis of answers of each field according to the field type.
GDPR Coverage	<p>Because web forms are among the most common interfaces for collecting user-provided data, there needs to be a GUI and development tools to design forms that comply with GDPR requirements. Doing so means implementing 2 Data Protection Features within Forms.</p> <ul style="list-style-type: none"> • Data Erasure (AKA Right to be Forgotten) Administrators can review Form's entries that potentially contain personal information and edit, anonymize or delete as needed through a simple interface. • Data Export (AKA Right to Data Portability) Administrators can export a user's personal data submitted through Forms before going through the erasure process.

Workflow and Business Productivity

Workflow and reporting features give users more ways to simplify processes and provide access to information.

Workflow Framework	Liferay DXP allows you to incorporate workflow into any of your own custom applications by leveraging Liferay's workflow APIs. This provides a better end user experience, saves your development team a lot of effort by reusing Liferay's workflow administration tools and provides seamless integration with all supported workflow engines.
Reports	Business intelligence and reporting tool showing activity and history of various applications in the platform (e.g., documents downloaded by groups, statistics on message board threads, most active users). It can also make use of the JasperReports application.
Workflow	Workflow allows a user to define any number of simple to complex business processes/workflows, deploy them and manage them through a web interface. These processes have knowledge of users, groups and roles. A graphical workflow designer gives you a point and click interface to create workflows. It can be used in conjunction with Kaleo Forms or standalone to create workflow definitions without having to write XML.
Dynamic Data Lists	A Dynamic Data List is a user-defined collection of records, similar to a spreadsheet. Users can create custom lists of information that can be published as workflow-enabled forms. These forms can be shared dynamically with other users to capture information such as an RSVP, tasks tracking and managing issues. Dynamic Data List record sets also include versioning for records.
User-Driven Workflow and Approval	Not only is there an embedded workflow for content, Liferay DXP also allows users to create their own workflow and define the number of approval paths based on their own unique business requirements and operational needs. For example, administrators can implement an approval process for new document uploads before they appear in the Document Library.

Workflow Metrics	<p>Gain insight into how long certain workflow events take to complete, with options to filter by Workflow Version. Users can create SLAs to set deadlines on a workflow process's events. Once defined, Workflow Reports can measure compliance with SLAs to help users better understand the throughput performance of processes in a given timeframe and better optimize these processes. Reports can be sorted by Item Subject, Created Date, Created By, Due Date, Assignee.</p>
Accounts	<p>Accounts empowers both sides of the B2B space by providing companies a central entity from which to conduct business on Liferay DXP. Accounts provides a digital construct to model and manage the personnel and their respective roles, manage business-critical information (such as Tax ID, Addresses), and ultimately facilitate stellar service experiences through enablement of the various interactions between these businesses.</p>

Digital Asset Management

Manage and publish any asset on one central system to not only enable your employees or customers to easily collaborate and share documents and media, but also reduce the amount of time spent searching for those assets.

Documents	Features around document and media management offer administrators more control over how assets are stored, shared and accessed. Additionally, Liferay DXP can integrate with repositories such as SharePoint, Google Drive and Alfresco.
Documents and Media	<p>Unified document repository that houses documents, video, audio, images and other media types from one place. It can be leveraged across an enterprise, within a specific group, or for a single individual as a web repository.</p> <ul style="list-style-type: none">• Enterprise-wide repositories allow groups to store assets, tag them, lock them, search for and leverage them in web pages or download them for use offline. It provides a clean and attractive display to find and browse all images, video and other media assets. Other features include:• Check in/check out, metadata and versioning. Document file formats may be converted at the time of upload. Items saved are displayed through the Display app and Document and Media Display app.• Multiple-file upload allows users to upload and store a document in one file format while making it available for download in other formats (i.e., a .doc file can be available for download as a PDF with Liferay providing the conversion at download time).• Create shortcuts to videos stored in different video streaming services (Youtube, Vimeo, Facebook and Twitch) to easily create content in the portal and embed them, categorizing and tagging them to help users search for them.• Set expiry dates on Documents to ensure that licensed content is only presented while the license is valid. Document Titles and Filenames are independent to provide greater storage and display flexibility• Create Document Types and author Documents using a consistent forms-builder experience shared across Forms, Web Content, and Documents.

Bulk Management	Manage digital assets and files at scale with an improved tool for bulk management of tags, categories and file operations like deletion, moving files, etc.
Google Drive Plugin	Lets users create shortcuts to Google Drive files in their Documents and Media repositories. These documents can be viewed and managed from Documents and Media. Once deployed, you can configure this app from the Control Panel.
CMIS Integration	Integrate back office systems in order to surface assets to customers or add social and other metadata. Mount and browse SharePoint, Documentum, Alfresco and other CMIS-compliant repositories within Liferay DXP.
Document Types and Metadata Sets	Administrators can create their own custom metadata sets and document types into language familiar to users. For example, financial reports, surveillance videos, and so on can be defined in a way that makes sense for the business functions of the content (e.g., author, reporting period, etc.).
Online Document Editing	Use the Google Docs editor to allow activities related to creating and editing documents via portal.
Office 365™ Integration	Create and edit Office 365 documents, presentations and spreadsheets stored in Liferay DXP. This feature takes advantage of Liferay's existing permissions system, versioning and sharing capabilities.
Document Previews and Preview Generation	Provide a preview of the document (including images, videos, audio clips) to easily identify the content of the document. Automatically generate a full document preview in Liferay DXP.
P2P Document Sharing/Asset Sharing	Allows sharing documents and media assets with registered users to increase collaboration for instances where multiple users need to work on a single asset.
Search (Documents and Media)	Search for documents, video, audio, images and other media types based on file names, tags, metadata and the file's text content.
File Types	Liferay DXP has the capability to support any file type from Office documents, images, through to audio and video files.

Versioning and Automatic Versioning Policies	Liferay DXP versions documents and increments them as you make changes, enabling you to rollback and view the version history. Introduces intelligent/definable versioning to enrich historical and auditing context of a document's lifecycle.
Media Selector	Easily upload or select files with the built-in media selector. This feature is also highly extensible so that new sources of media (e.g., Google, Flickr, YouTube) can be added to any application.
Inline Image Editor	Allows for simple image editing directly from within Liferay, eliminating the need for an external tool while creating content. Resize or crop any image uploaded to Documents and Media from within blogs or any other application that uses an item selector. The image editor has been designed in a way to make it easy to customize and allows for developers to create and deploy tools that modify images.

Collaboration and Social

Collaboration in Liferay DXP is supported with applications for blogs and social networking, as well as a solid set of tools for forums, message boards and other functionalities. Connect people and systems together on a modern interface focused on getting work done.

Collaboration	Collaboration in Liferay DXP is supported with applications for blogs, forums, message boards and other functionalities. Social networking features such as an activity wall, friends list, @ mentions, activity tracker and social activity are also available to further support collaboration activities. Easily bookmark contents in the platform and share them to a group of users all available for download through the Liferay Marketplace.
Knowledge Base (and associated apps)	Allows users to add and categorize content in the form of articles. Content can be added directly through the web or imported from external sources with category-based navigation. This helps users easily find answers to questions they may have. Knowledge Base includes several apps: <ul style="list-style-type: none">• Knowledge Base Display• Knowledge Base Article• Knowledge Base Search• Knowledge Base Section
Search and Tagging	Tag web content, documents, message board threads and more to dynamically share important or interesting content with other users. Users can then search for relevant information through faceted search, allowing one to filter results by specific criteria within specific apps, communities, the entire platform and even external integrated applications.
Invitations	Allows users to invite others to join a specified site and sends a notification.
Page Comments	Allows users to leave comments on any user page.
Page Ratings	Allows users to leave ratings on any user page.
Page Flags	Allows users to report inappropriate content on a page.

Blog	Liferay DXP's blog widget provides a modern WYSIWYG editor (AlloyEditor) designed to create entries quickly and a modern card design for displaying blogs. The inline image editor also allows for easy image editing directly within Liferay DXP. You can drag-and-drop images right into the blog text. If you want to add format to some text, just select it and a modern toolbar will offer the format options. Additional features include friendly URL creation, estimated reading time, unsubscribe from emails, publication date, RSS support, threaded user and guest comments, tags and labels, social bookmarking links, email notifications of blog replies and an entry rating system. You can also add videos inline while writing a new entry from popular services such as YouTube, Vimeo, Facebook Video and Twitch.
Blogs Aggregator	Grabs blog entries from the entire portal or by specific organizations.
Recent Bloggers	Dynamically displays a list of recent bloggers.
Forums/Message Boards	A full-featured forums solution with threaded views, categories, RSS capability, avatars, drag-and-drop file attachments, drag-and-drop image additions, section renaming, category and thread grouping, notification management, previews, dynamic list of recent posts and forum statistics. Message Boards work with Liferay's fine-grained permissions to give detailed levels of control to administrators and users.
Questions	<p>Allow users to have a dedicated place for questions and answers where they can look for answers to the problems they are facing or help others. It takes full advantage of the GraphQL APIs and the message boards infrastructure.</p> <p>Users can group the questions on different topics, ask any question they have, vote the answers, mark the most valuable answer so others can check it easily, etc.</p>
Wiki (and associated apps)	A straightforward Wiki solution with versioning capabilities, categories, Creole, HTML, or plain text modes, WYSIWYG editing, drag-and-drop support for page creation, page history and reversion and permissions.

Calendar	A community-based calendar with task lists that allows users to create, manage and search for events. Events can be shared across communities and event reminders can be set up to alert users of upcoming events by email, notifications or SMS. You can also create and manage company resources through the calendar.
RSS	These allow users to get dynamically updated digests of critical news topics, blogs and other publications. Users can configure the order of topics displayed and how many articles are shown per provider.
Alerts and Announcements	Offers a free form text area that can display and update new information quickly. You can target announcements to readers by group or role.

Developer Tools

Liferay gives you control over maintaining and extending your Liferay DXP instance with developer tools for building, managing and controlling Liferay projects with convenience and added simplicity.

Front-End Toolkits	A set of tooling that Liferay created to help developers use NPM in their projects so that they can deploy them to Liferay DXP and see everything working seamlessly with little effort. These toolkits help developers create, update and maintain themes built on Liferay DXP as well as help produce an OSGi bundle containing the needed NPM dependencies so that it can be run when deployed to Liferay DXP.
Front-End Unit Testing	Unit testing is a crucial part of the development cycle that ensures that code is functioning properly. Liferay has made this a priority in Liferay DXP throughout the product.
IntelliJ IDEA Plugin	Integration with IntelliJ IDEA that can be configured for use with Liferay DXP development.
Liferay Marketplace	Developers can sell, share and download themes, integration plugins and entire applications built on Liferay DXP in Liferay Marketplace.

Liferay Workspace	Liferay Workspace is a highly structured environment for modular development. Import Workspace projects into any IDE with built-in Maven or Gradle support, eliminating the need to only use Eclipse for development.
Blade CLI	Liferay development projects can be completely controlled from the command-line using Blade CLI. Blade CLI performs development tasks such as creating new projects, installing Liferay Servers and more.
Upgrade Tool	A revamped Upgrade Tool simplifies the upgrade process from previous versions of Liferay. The standalone tool lets system administrators restart failed upgrades, reducing the time spent troubleshooting.
Lexicon and Clay	Lexicon is a design language created to provide a common framework for building interfaces within the Liferay product ecosystem. Lexicon is a guide to provide a satisfactory and unified experience to its users. Clay, the web implementation of Lexicon, is based on Bootstrap and designed to be extensible.
REST API Builder	Similar to the service builder, this tool accelerates development by generating scaffolding needed to develop business logic for custom REST and GraphQL APIs.
Developer Studio	An all-in-one, integrated development environment for building apps and modules. Developer Studio makes it easy to use project creation wizards to create modular projects based on Maven, Gradle and bndtools. It also includes tools for aiding in Liferay DXP upgrades and includes a migration tool to help migrate plugins to the next version.

Search

Recapture time users spend looking for information with powerful out-of-the-box search capabilities.

Liferay Enterprise Search (optional add-on)	<p>Liferay Enterprise Search is an add-on subscription that provides end-to-end support for Liferay DXP and Elasticsearch, as well as additional modules for integration with Liferay DXP. Users can monitor their search cluster health, replicate search clusters, leveraging ML-driven relevance tuning, and more.</p> <p>LES capabilities are bundled with Liferay DXP and active for all customers to preview without a subscription. Customers will require an active LES subscription to obtain support for these features.</p>
Search Experiences	<p>Search Experiences (part of Liferay Enterprise Search) allows users to build sophisticated search query algorithms using a visual query builder to define Blueprints which can be applied to any search results page.</p>
Elasticsearch integration	<p>Elasticsearch, the market-leading search engine for modern web applications, is the default search engine in Liferay DXP and provides powerful search monitoring, tuning and scaling capabilities.</p>
X-Pack Security integration	<p>Liferay DXP can establish secure connections to Elasticsearch using X-Pack Security.</p>
Multi-Tier Search	<p>A platform with web content, documents, images, wikis, blogs and other user-created content becomes a massive repository of data. Search becomes a vital aspect for users of the system since it is essential that users can find the content they need when they want it. Liferay's search also allows users to search across all assets within the platform to which they currently have access, while also restricting them from assets in which they do not. This multi-tier search capability ensures that users have access to only open content or content available to them based on their roles and membership in various communities.</p>
Faceted Search	<p>Liferay provides users an efficient way to instantly refine search results by drilling down with specific constraints that match the user's search criteria. For example, a retail site built on Liferay would allow you to search for merchandise by inputting various combinations of criteria, such as color, size and price.</p>

Filter/Sort	Users can filter and sort search results within the UI.
Customizable Search Widgets	Liferay provides a palette of widgets which can be used together to build sophisticated search experiences - including Search Bar, Search Results, Sort, Category Facet, Folder Facet, Modified Facet, User Facet and more. Most of these widgets can have their UI customized through the use of Freemarker Widget templates.
Multi-Language Search	Search across all languages for Web Content for multi-language sites and portal instances.
Search Admin Tools	Handle administration tasks like monitoring the health of the Elasticsearch cluster, reindex search indices, and view field mappings. The execution scope of Index Actions can be limited to selected Instances.
Search Tuning Tools	Liferay DXP allows granular search tuning via the Synonyms and Result Rankings applications. Synonyms sets allow defining terms with equivalent meaning. Result Rankings allow explicitly pinning or hiding specific results for a particular search query.
Low-Level Search APIs	Leverage improved search APIs to interact with either Elasticsearch. Developers can call the search engine without writing or using models or indexers and allows access to every aggregator and query type of Elasticsearch.

Analytics

Enhance your digital marketing strategies with powerful analytics that will provide key insights into your customers. See [Liferay Analytics Cloud](#) for more information.

Workflow Process Analytics	Create due date definitions for workflow processes and for workflow tasks. Liferay DXP provides analytics for all instances of open and in progress processes in real time allowing for easy identification of operational bottlenecks and insight to optimize efficiency.
Customer Profile Analytics	Pull customer data from multiple sources to create in-depth analytics and a single view to create known users. Visualize customer data, build dynamic segments and analyze segments and individuals. Integration with Salesforce allows for enhanced customer profiles through tracked user and account behavior on your digital touchpoints.
Page Analytics	Measure page performance through page data visualizations in an aggregated view. Track behavior and understand page performance with touchpoint charts, bounce rate metrics and time on page. Track interactions on your custom solution developed with DXP using simple tags.
Traffic and Path Analytics	Display traffic types, filter and visualize paths for easy source identification. Display assets and filter interactions on each asset by touchpoint.
Asset Analytics	Track and visualize engagement levels for assets and web content through an aggregate view. Asset-specific reports detail use case-specific insight about usage, views and engagement. Liferay DXP 7.3 includes engagement and SEO metrics in the very context of the display pages.
Event Analytics	Track any interactions on your digital experiences using a custom tracking code and visualize these events in a flexible analysis report to gain deep insights of your users' behaviors.

A/B Testing	<p>Content creators can use A/B testing to create and customize tests to evaluate which elements on Content Pages perform better and edit content accordingly. Liferay DXP's A/B tests leverage Bayesian statistics to identify the probable values of lift for a variant, allowing your business to make more informed decisions. Native integration with Liferay Analytics Cloud allows for data collected for the running test to determine a winning variant. Learn More ></p>
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Cloud and Infrastructure

Simplify infrastructure management and reduce IT spending so that you can focus on what matters in your business.

Cloud Deployment (Liferay DXP Cloud)	<p>Liferay DXP can be deployed quickly and managed in the cloud with Liferay DXP Cloud, an enterprise PaaS offering available with a separate subscription. Liferay DXP Cloud takes care of many infrastructure needs to free up IT resources to focus on building the new applications and features that bring value to the business.</p> <p>See Liferay DXP Cloud for more information.</p>
Cloud Support	<p>On-premise and hosted cloud configurations are also supported by Liferay with multiple hosting and managed hosting providers available today including AWS EC2, Azure and more.</p> <p>See Liferay Global Services for more information.</p>
High Availability and Scalability	<p>The Liferay platform has been tested to support tens of thousands of simultaneous virtual users as an infrastructure portal and in collaboration use cases on a single application server. It has also been deployed in large installations with millions of active users in the most demanding environments. Liferay DXP is highly scalable - for example, it has been certified to work seamlessly with data grid products for massive scalable data caches.</p> <p>Additionally, customers can feel secure in deploying Liferay to cloud-based environments—many users have deployed the platform to private clouds built on top of VMWare, Xen and KVM technologies and to public cloud infrastructures like Amazon EC2.</p>

What's Next

Learn more about how Liferay can help your business take the next step in your digital strategy.

Request a demo from one of our team members at liferay.com/request-a-demo.



Liferay makes software that helps companies create digital experiences on web, mobile and connected devices. Our platform is open source, which makes it more reliable, innovative and secure. We try to leave a positive mark on the world through business and technology. Hundreds of organizations in financial services, healthcare, government, insurance, retail, manufacturing and multiple other industries use Liferay. Visit us at liferay.com.

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