

Learning Paths - Level 01

Content Authoring and Management

Session Breakdown

05 min	01	Introduction + Case Study Recap
10 min	02	Managing Digital Assets
10 min	03	Content Management in Action
10 min	04	Preview, Collaboration and Publishing + Governance
05 min	05	Working with Products and Catalogs
15 min	06	Personalization and Experiences
10 min	07	What's Next? + Q&A



Part 01

Introduction and Session Scope



What is content management and why is it important?

Introduction to Content Management

- Term used both generically and broadly
- Modern Content Management focuses on enabling non-technical to manage data without deployment
- Content Management is a term used to describe the Lifecycle of managing *Data*
- Lifecycle event examples include:
 - Collection of information from users/systems
 - Retrieval and Delivery of data (not always users)
 - Governance and Overall Management
- Promotes the idea of a collaborative process that can involve one or more stakeholders with varying levels of skills and responsibilities



Content Management System (CMS)

Clarity's Critical Success Factors

- ✓ 1. Non-technical participation
- ✓ 2. Simplified maintenance (and evolution)
- ✓ 3. Future proofed and flexible
- ✓ 4. Increase engagement and user experience through personalization
- ✓ 5. Risk mitigation with better governance
- ✓ 6. Lower investment / total cost of ownership



What we are planning to cover in this session

Session Scope

- Re-Development of a public facing website content
- Cover day-to-day management of sites highlighting best practices
- Focus on out-of-the-box features and capabilities
- Provide guidance/decision workflows for when to choose which feature
- Focus on a handful of pages that represent the diversity of content that is required



Part 02

Managing Digital Assets



Clarity Business Requirements

- Reduce the effort necessary to manage online assets
- Ensure only assets that have been approved by both Marketing and Legal are available for use
- Promote reusability and eliminate ambiguity by providing content creators pre-approved options to choose from
- Allow for assets to be grouped together and shared with specific groups/solutions
- Provide a performant solution by supporting different image sizes for different screen sizes and breakpoints



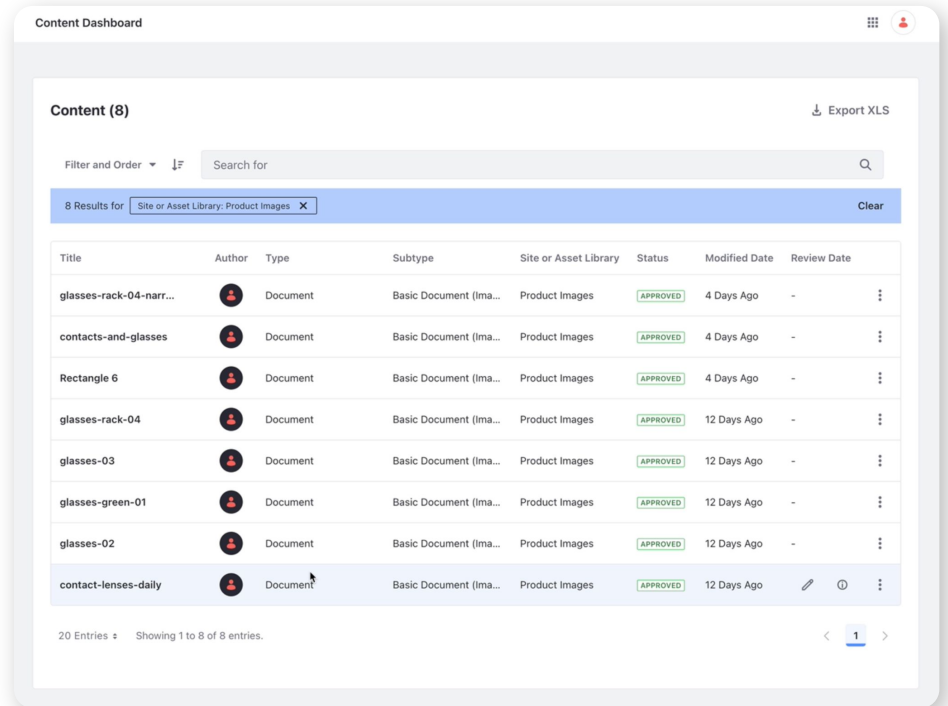
Feature Alignment

- 1** **Asset Libraries;** provides an easy way to create buckets of assets that can be secured (permissioned) and shared across one or more sites.
- 2** **Content Dashboard;** provides a single pane of glass related to assets with a variety of types, sorting and filtering. Can be connected to Analytics Cloud to provide in context analysis of asset performance.
- 3** **Workflow;** includes single approver workflow out of the box. Visual workflow designer can be used to build more complex flows in order to satisfy any governance requirements.



Content Dashboard in Action

1. Use the waffle menu to open the shade
2. On the Applications tab choose Content Dashboard
3. No charts based on config but we do have table of entries showing different types and scopes
4. We see Documents, Blog Entries, etc
5. Filter on scope and choose one of the Asset Libraries
6. Notice all content now just from the Library
7. Do a further filtering on Extension Type
8. Choose JPG
9. Results refreshed to show additional filtering
10. Use the info icon to see details for the file



The screenshot displays the 'Content Dashboard' interface. At the top, it shows 'Content (8)' and an 'Export XLS' button. Below this is a search bar and a filter dropdown. A blue banner indicates '8 Results for Site or Asset Library: Product Images X'. The main content is a table with the following columns: Title, Author, Type, Subtype, Site or Asset Library, Status, Modified Date, and Review Date. The table lists 8 items, all of which are 'Document' type and 'Basic Document (Ima...)' subtype, located in the 'Product Images' library. The status for all items is 'APPROVED'. The modified dates range from '4 Days Ago' to '12 Days Ago'. The last row, 'contact-lenses-daily', is highlighted, and a mouse cursor is pointing at the info icon in its actions column.

Title	Author	Type	Subtype	Site or Asset Library	Status	Modified Date	Review Date
glasses-rack-04-narr...	[User Icon]	Document	Basic Document (Ima...	Product Images	APPROVED	4 Days Ago	-
contacts-and-glasses	[User Icon]	Document	Basic Document (Ima...	Product Images	APPROVED	4 Days Ago	-
Rectangle 6	[User Icon]	Document	Basic Document (Ima...	Product Images	APPROVED	4 Days Ago	-
glasses-rack-04	[User Icon]	Document	Basic Document (Ima...	Product Images	APPROVED	12 Days Ago	-
glasses-03	[User Icon]	Document	Basic Document (Ima...	Product Images	APPROVED	12 Days Ago	-
glasses-green-01	[User Icon]	Document	Basic Document (Ima...	Product Images	APPROVED	12 Days Ago	-
glasses-02	[User Icon]	Document	Basic Document (Ima...	Product Images	APPROVED	12 Days Ago	-
contact-lenses-daily	[User Icon]	Document	Basic Document (Ima...	Product Images	APPROVED	12 Days Ago	[Edit] [Info] [More]

20 Entries • Showing 1 to 8 of 8 entries. < 1 >

Feature Alignment (cont'd)

4

Documents and Media; centralized administration area where items can be added, updated, permissioned, organized into folders, tagged, checked in/out and more.

5

Adaptive Media; allows for different image sizes to be named and specified (eg. Thumbnail 16px X 16px). New images added will auto-generate variants based on the different rules provided.

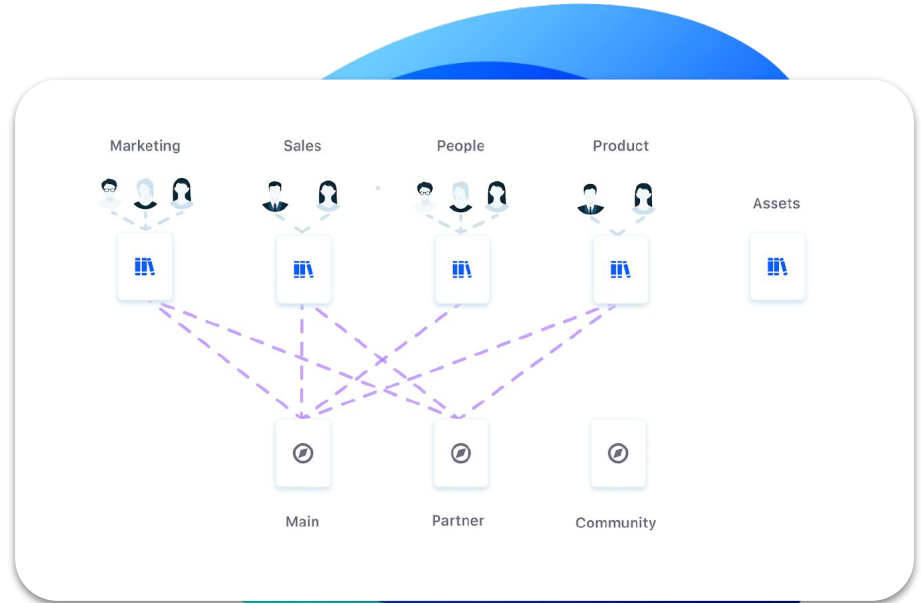
6

Headless API; full headless solution that allows you to batch load or reference files that are in the system from remote systems and tools.



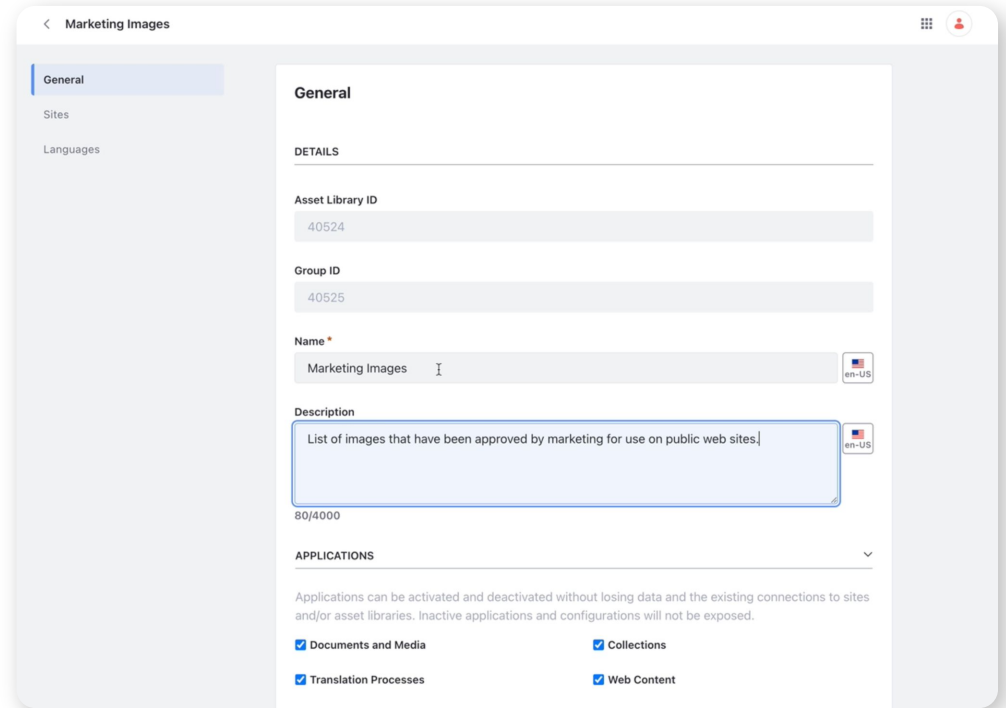
Sharing Content with Asset Libraries

- Allow marketers to create dedicated libraries of content to support multiple sites and channels
- Centralized storage and reuse
- Streamlined content collaboration
- Cross-site content sharing
- Version control and auditing
- Improved organization and discoverability
- Enhanced security and access controls
- Integration with other Liferay out of the box capabilities (unified experience)
- Staging and publication control



Asset Libraries in Action

1. Use the waffle menu to open the shade
2. On the Applications tab choose Asset Libraries
3. There are existing entries but we'll create a new one called Marketing Images
4. Update the description and asset types
5. Set the scope so that our site can see it
6. Go into the library to Docs and Media
7. Add the images that we want available
8. Edit the blog post
9. Change the image
10. Navigate to the Asset Library to choose the new image
11. Publish the change and see the live results



Part 03

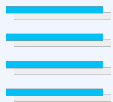
Content Management in Action



Clarity Business Requirements

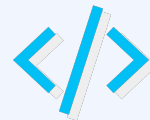
- Provide a centralized content repository that can be shared/access by multiple systems
- User-friendly and intuitive content management experience that allows for non-technical users to create and maintain the site content/assets
- Support a corporate governance model by allowing for changes to pass through the proper channels/gates before being visible to everyone.
- The ability to create personalized experiences so that the right content is rendered for the right users.
- Open system that allows for connectivity to other systems in the enterprise in order to support data sharing
- Group and categorize diverse content types under relevant themes or topics





**Structured
Web Content**

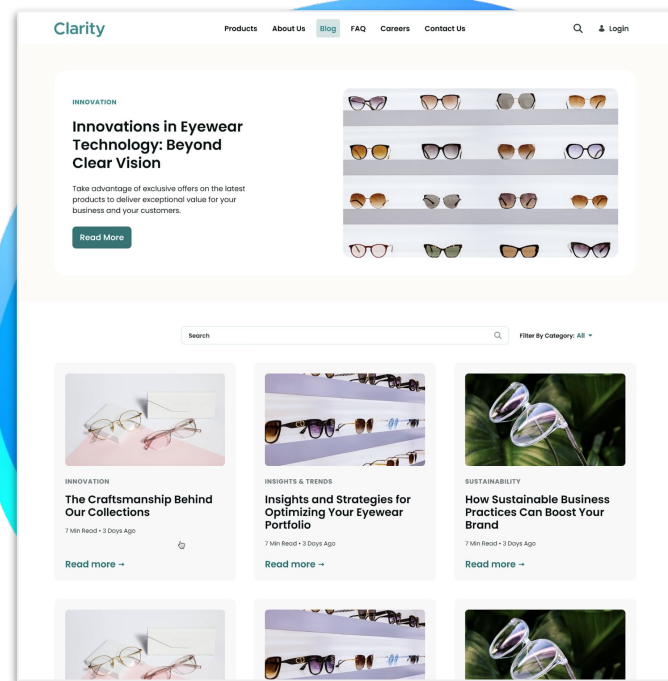
VS



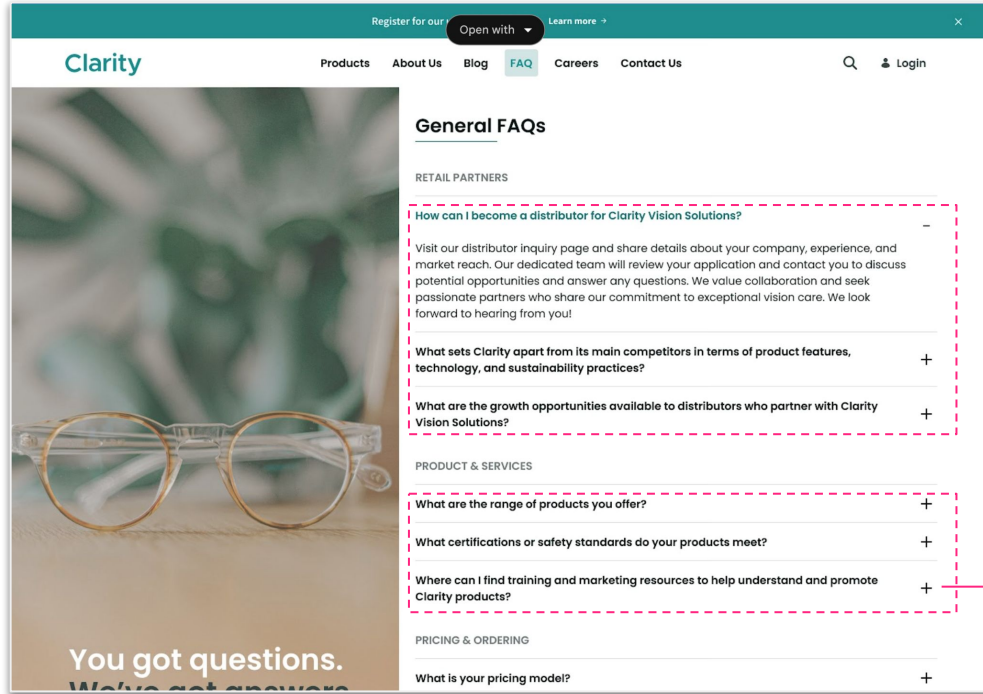
Fragments

Structured Content

- **Content-focused;** used to store subject material such as articles, news, announcements, etc
- **Structured;** by providing fields that create the form used by content administrators
- **Reusable;** as a single item can be rendered in more than once anywhere in the site
- **Dynamic;** can be edited and published independently and updates automatically propagate
- **Examples:** Blog posts, press releases, event details



Web Content in Action

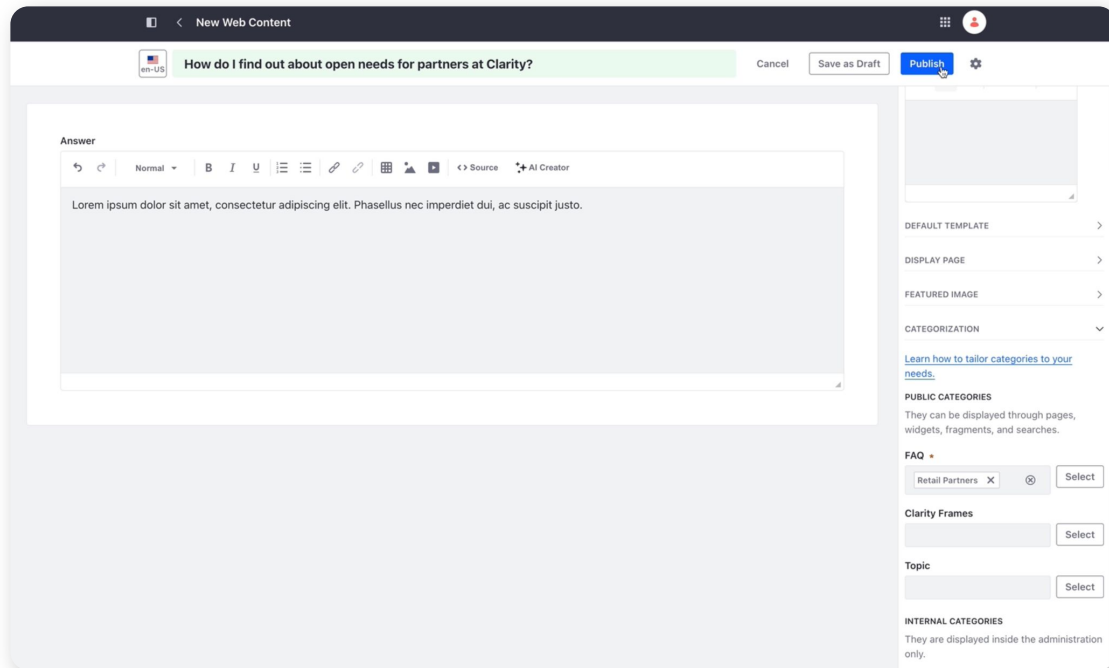


Collection of FAQs items associated with a category

FAQ Structured Content Item

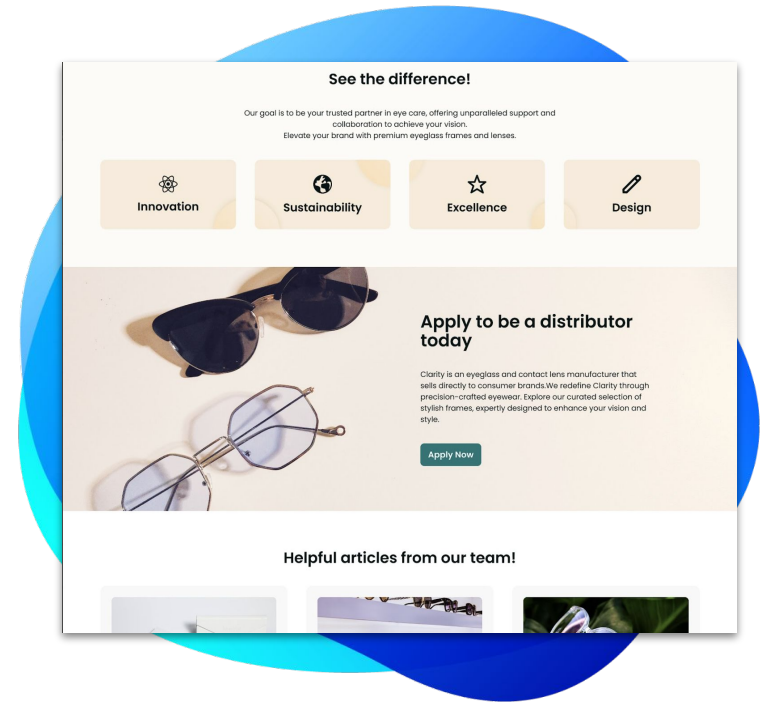
Structures and Content in Action

1. Go to the Content and Data section
2. Go to the Web Content section
3. Navigate into the FAQs folder
4. Navigate into the Resellers folder
5. Add a new FAQ item
6. Notice that there are set fields - the *Title* being the question and the *Answer* field for the response
7. Make sure to add the Reseller category
8. Publish the new item
9. Navigate back to the FAQ page
10. Notice the new item is already present

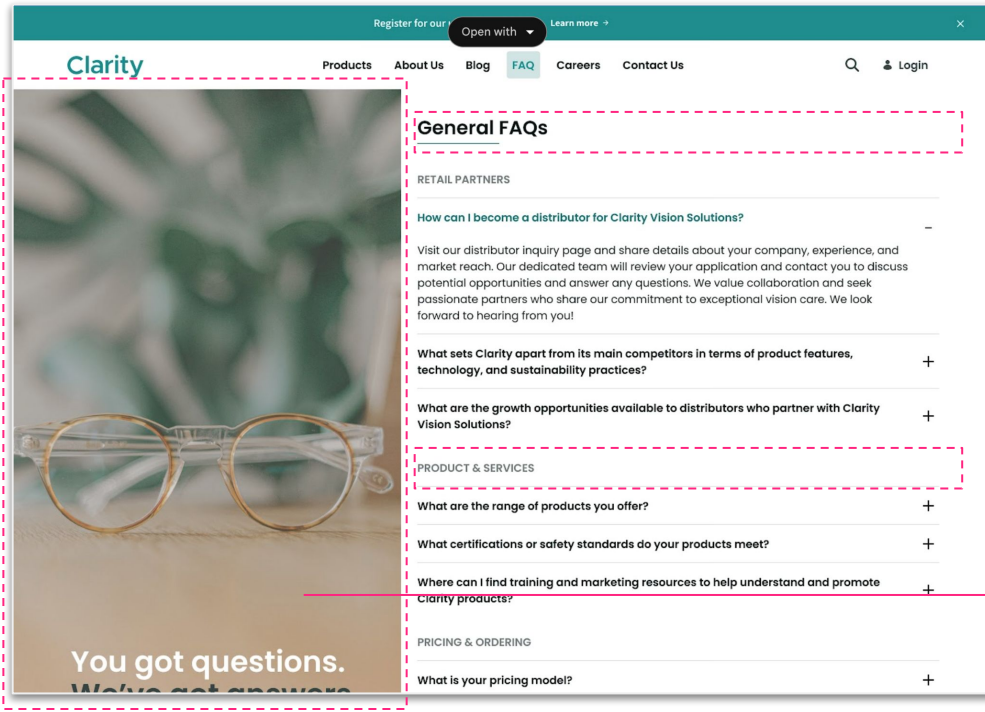


Fragments

- **Reusable building blocks** made up of HTML, CSS and Javascript
- **Offer ultimate flexibility** as they can be used in a variety of places (menus, headers, forms, etc)
- **Dynamic integration** can include widgets, web content or even other fragments
- **Autonomous** as changes to one fragment on Page X don't affect fragment on Page Y
- **Examples:** Navigation Bars, Section Headers, Hero Banners, Social Media Integrations



Fragments in Action



Header Fragments

Image Fragment

Decision Criteria

1

Security

Need to restrict ownership and changes, or, limit visibility to a specific group of people

2

Governance

There are business processes (reviewers, approvers, required data, etc) that need to be enforced

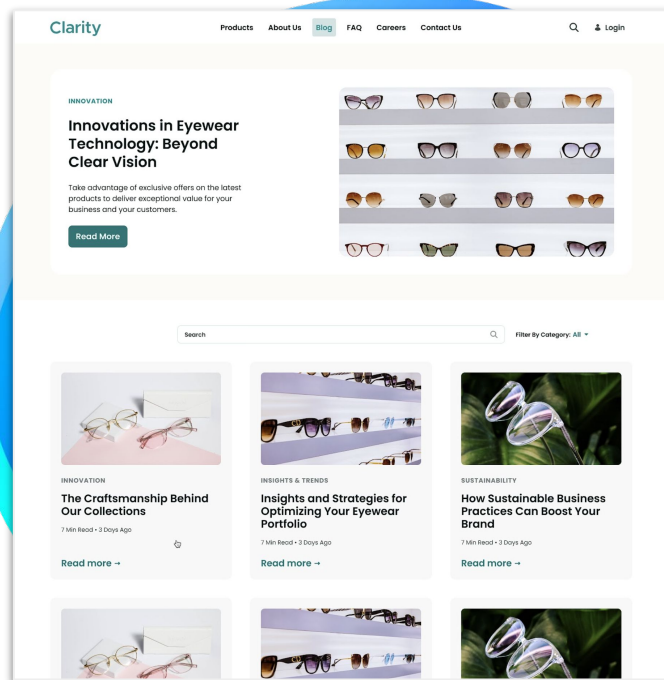
3

Reusability

Content will be used in more than one place with one or more visual treatments

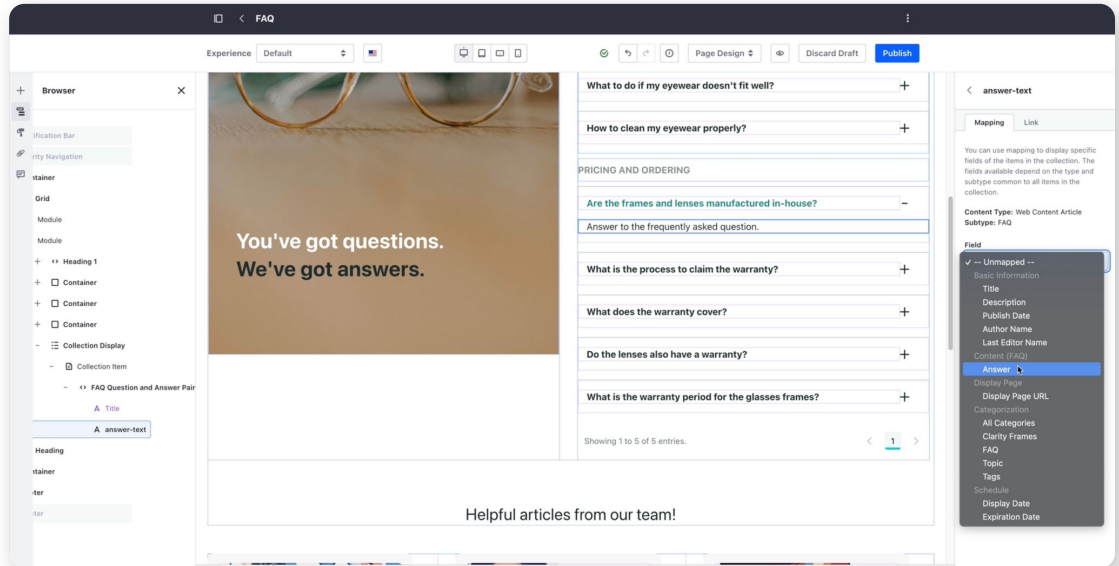
Collections

- **Mixed-Content;** can represent all of the same type or a mixed-bag of different types of content
- **Manual or Dynamic;** hand pick the items or allow for selection criteria to choose items on the fly
- **Filter, Sort and Order;** control what and how items are displayed based on different criteria
- **Segmented;** render different items for different users based on the segment (persona) they represent
- **Examples:** Latest news, Resources, Upcoming events, etc.



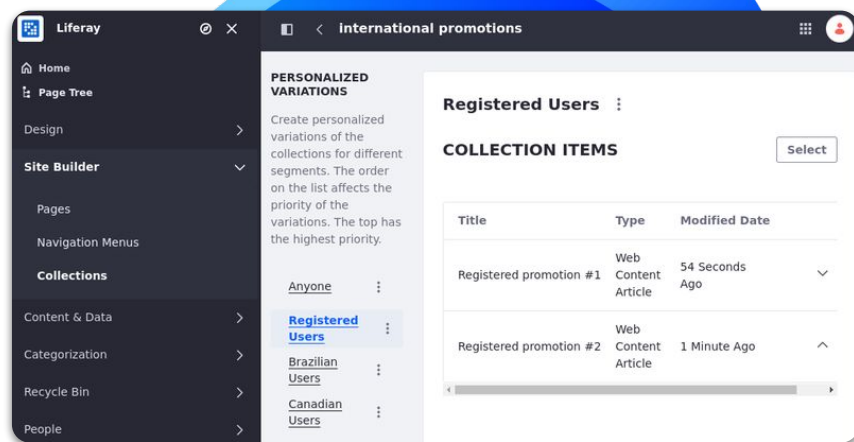
Fragments and Collections in Action

1. Edit the FAQ Page
2. Add a new container
3. Add a section header and update the text
4. Add a *Collection Display Fragment*
5. Configure it to use the new collection
6. Drag the FAQ fragment into one of the cells
7. Map the question to the *Title* attribute
8. Map the answer to the *Answer* attribute
9. Remove the pagination from the collection
10. Publish the page



Personalizing Collections

- Personalized collections for reuse on multiple pages
- Create and manage segmentation based targeted content lists
- Create a unique variation for any Segment
- Personalized collections are used in exactly the same way as their default variant, in:
 - Asset Publisher
 - Collection Pages
 - Collection Display Fragment
 - Through the OpenAPI APIs
 - Provides the ability to present dynamic lists of content personalized to user interests, behaviour and attributes



Part 04

Preview, Collaboration, Publishing and Governance



Clarity Business Requirements

- The ability to preview and test content changes before publishing them live to the website
- Facilitate collaboration among content creators, editors, and reviewers before publishing content
- Schedule content publication for specific dates and times to ensure timely releases or coordinated campaigns
- Ability to revert to previous versions of content in case of errors or unexpected issues after publishing
- Restrict access to sensitive content or work-in-progress versions during the editing and review process
- Ensure content adheres to legal regulations, brand guidelines, or internal approval processes before publishing





Staging

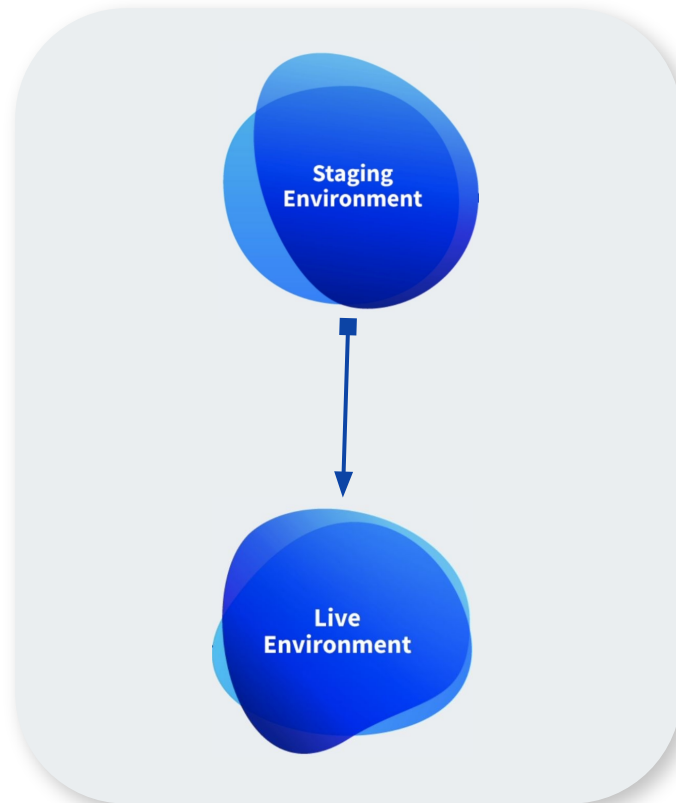
VS



Publications

Providing *Staged* Content

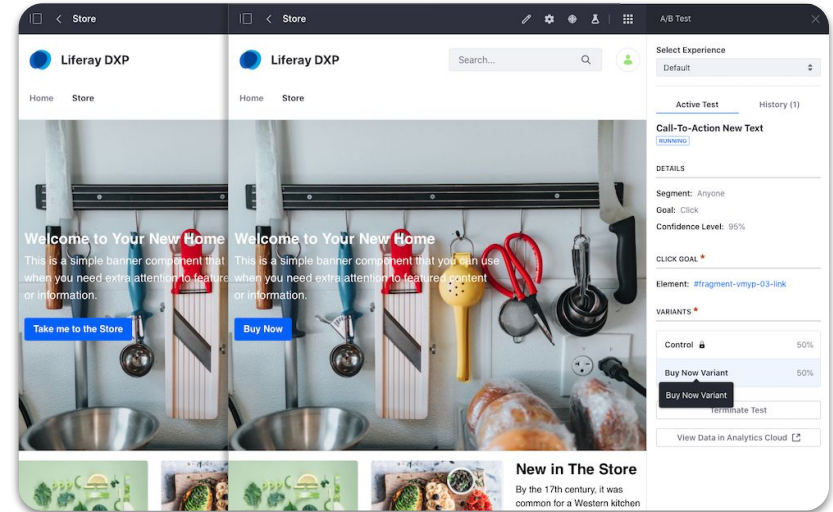
- **Regulatory requirements** that dictate the use of a physically separate environment for testing and publishing content
- **Simple websites with infrequent updates** may benefit from the simpler workflow – basic preview and testing – that comes with *Staging*
- **Inexperience with version control systems and processes** will lead to easier-to-adopt scenarios – however beware that this, as a sole reason, will not age well



Change Management w/ *Publications*

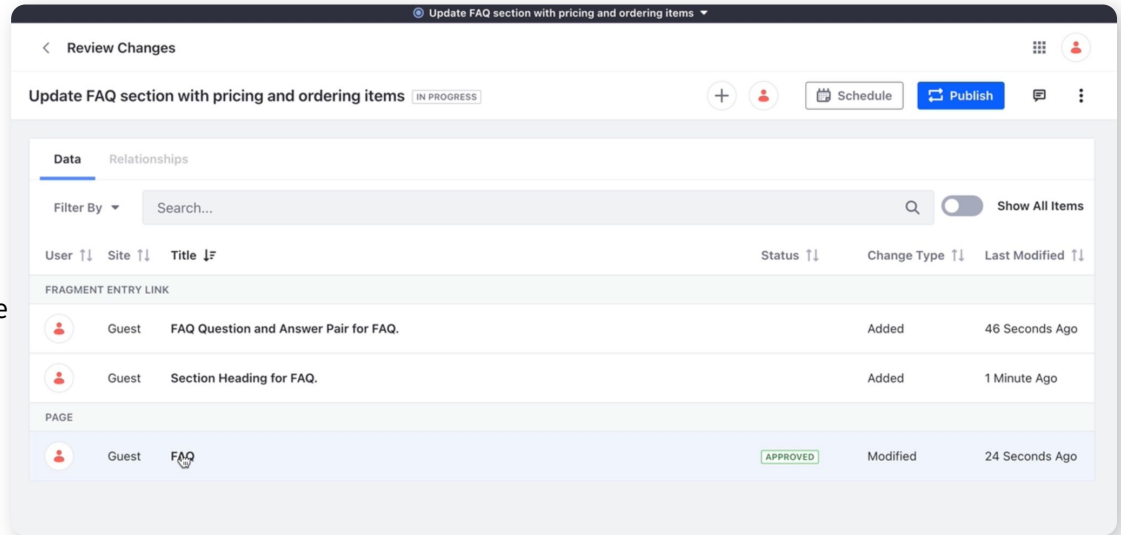
Publications should be your first class citizen as it is the most advanced and flexible solution for meeting the needs of collaborative content management.

- Modern approach that uses a version control like system that allows branching, merging and tracking changes
- Better collaboration by creating teams (with discrete roles) and tools that foster better communication
- Flexible publishing and streamlines workflow with draft versions, approvals, and scheduling of individual items or entire sets of changes
- Best suited for complex sites with frequent changes managed by multiple teams
- Perfect when granular control over publishing is needed
- Reliable solution for rollback when human error occurs and a revert is necessary



Publications in Action

1. Go to the Content and Data section
2. Go to the Web Content section
3. Navigate into the FAQs folder
4. Navigate into the Resellers folder
5. Add a new FAQ item
6. Notice that there are set fields - the *Title* being the question and the *Answer* field for the response
7. Make sure to add the Reseller category
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9. Navigate back to the FAQ page
10. Notice the new item is already present



Preview, Collaboration, Publishing and Governance

Weighing the Differences

Capability

Publications

Staging

Host working and production content on separate servers (environments) – security or regulatory requirements



Create and manage separate working environments for different projects and teams



Comment on blocks of changes



Review differences between working and production environments



Includes changes from multiple sites or asset libraries in the same working environment



Maintain a detailed history of all published changes



Revert published changes to content



Site templates



Workflow

- **Automated tasks;** automate repetitive tasks like approvals, notifications and content routing to save time
- **Reduced errors;** automated steps and rules reduce the risk of human error from manual processes
- **Clear roles and responsibilities;** assign specific tasks and approvals to designated user providing transparency throughout the process
- **Improved communication;** automation of notifications keep stakeholders informed about progress and status
- **Improved review and feedback;** structured review and feedback loops
- **Flexibility;** fully customizable workflows that you can design based on your specific needs
- **Integration;** works seamlessly with other Liferay features including the bulk of Liferay's API.0



Part 05

Catalogs and Products



Clarity Business Requirements

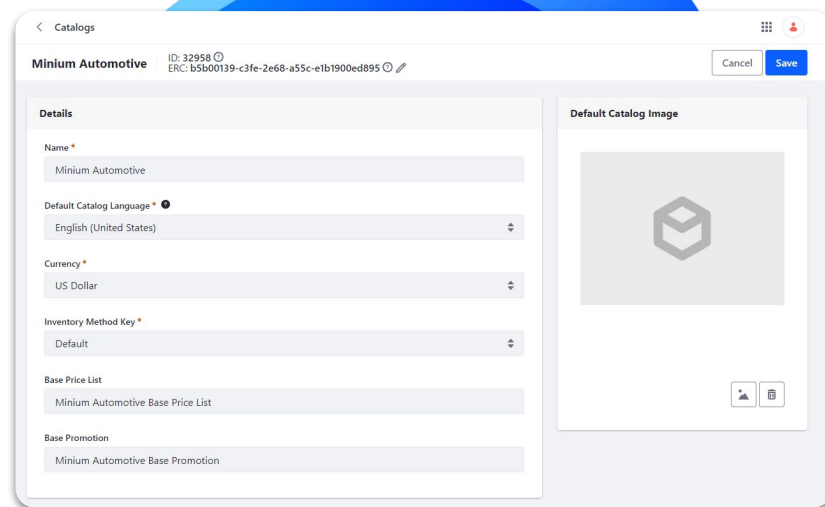
- Organize products into well defined categories and sub-categories for easy browsing and product discovery
- Provide detailed and engaging product information
- Track product inventory levels in real-time
- Easily search and filter products based on various criteria like category, price or specific attributes
- Personalized content by recommending products based on browsing behavior or purchase history
- Integration with systems (both internal and external) such as inventory management and shipping providers
- Capability to provide direct to consumer (B2C) transactional commerce (future state)



Catalogs

A catalog is the complete list of related products that can be displayed on a store site.

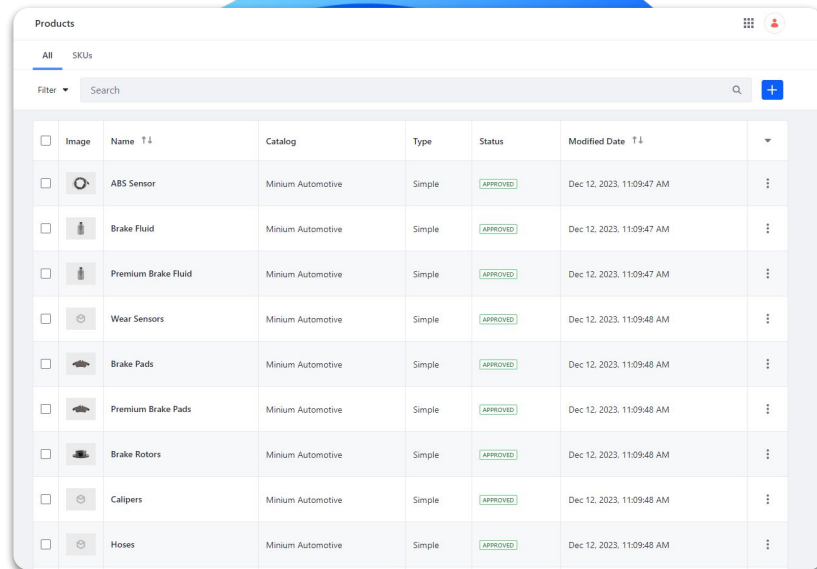
- Store administrators can create multiple catalogs (each with their own corresponding currencies) on a single Liferay Commerce instance.
- With each catalog a default catalog language and currency is associated.
- While creating a catalog, Base Price List and Base Promotion list get created
- Products in a catalog that do not have an associated product image use a placeholder image until one is configured. The default placeholder image is defined for each catalog.



Products Overview

Commerce Catalogs provides four out-of-the-box Product types: Simple, Grouped, Virtual and Diagram.

- **Simple Product:** Any physical product for which inventory is tracked.
- **Grouped Product:** Two or more Products from the Catalog that are packaged together and sold as a single item. Grouped Products are tracked in your inventory and can contain Simple Products, other Grouped Products, or Virtual Products.
- **Virtual Products:** Any non-tangible Product, such as music files, electronic publications, services, and warranties.
- **Shop by Diagram:** These are component parts belonging to a Bill of Materials (BOM) diagram that reference products in the store.



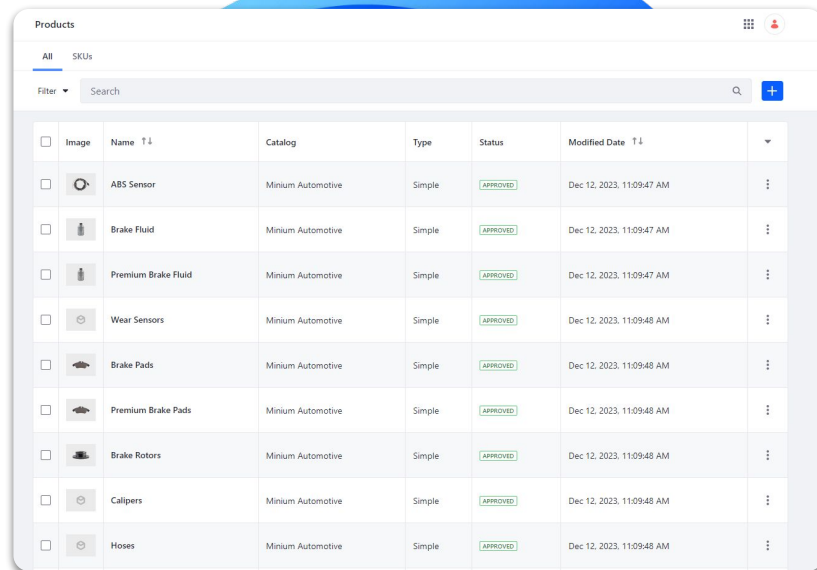
The screenshot displays the Liferay Products Overview interface. At the top, there are tabs for 'All' and 'SKUs'. Below the tabs is a search bar with a 'Filter' dropdown and a search icon. The main content is a table with the following columns: Image, Name (with a sort icon), Catalog, Type, Status, Modified Date (with a sort icon), and a vertical ellipsis menu. The table contains ten rows of automotive parts, all with a status of 'APPROVED'.

<input type="checkbox"/>	Image	Name ↑ ↓	Catalog	Type	Status	Modified Date ↑ ↓	
<input type="checkbox"/>		ABS Sensor	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:47 AM	⋮
<input type="checkbox"/>		Brake Fluid	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:47 AM	⋮
<input type="checkbox"/>		Premium Brake Fluid	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:47 AM	⋮
<input type="checkbox"/>		Wear Sensors	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM	⋮
<input type="checkbox"/>		Brake Pads	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM	⋮
<input type="checkbox"/>		Premium Brake Pads	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM	⋮
<input type="checkbox"/>		Brake Rotors	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM	⋮
<input type="checkbox"/>		Calipers	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM	⋮
<input type="checkbox"/>		Hoses	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM	⋮

Additional Benefits of Products

Leveraging *Products* offers more than just a predefined type of content. It also hooks into many additional advanced features to create a first class experience with minimal effort.

- Product details
- Product options
- Units of measure
- Configurable products
- Product media (images, videos, etc)
- Shop by diagram
- Multiple product type support
- Related products
- Downloadable product documents
- Product availability
- Product variants

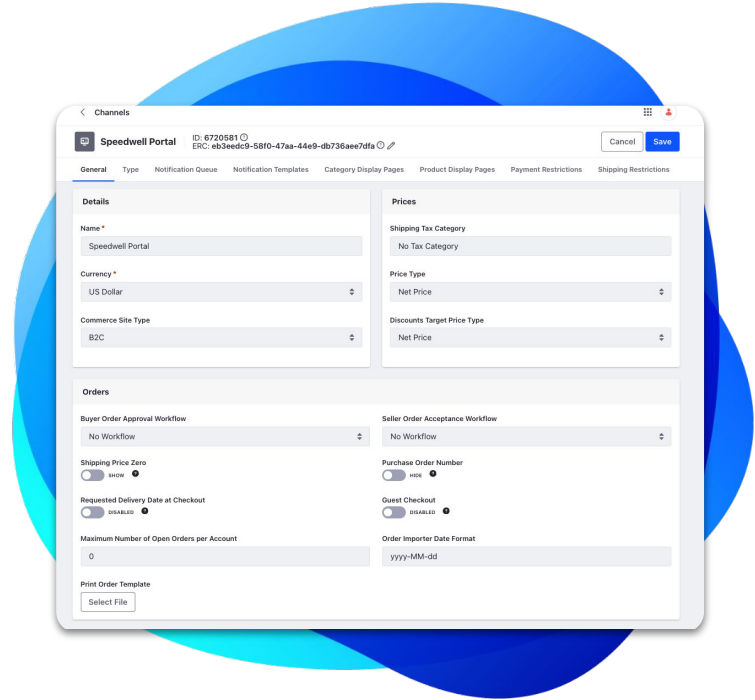


The screenshot displays the Liferay Products management interface. At the top, there are tabs for 'All' and 'SKUs'. Below the tabs is a search bar with a 'Filter' dropdown and a search icon. The main content is a table with the following columns: Image, Name, Catalog, Type, Status, and Modified Date. The table lists ten automotive parts, all with a status of 'APPROVED' and a modified date of 'Dec 12, 2023, 11:09:47 AM'.

Image	Name	Catalog	Type	Status	Modified Date
	ABS Sensor	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:47 AM
	Brake Fluid	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:47 AM
	Premium Brake Fluid	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:47 AM
	Wear Sensors	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM
	Brake Pads	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM
	Premium Brake Pads	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM
	Brake Rotors	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM
	Calipers	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM
	Hoses	Minium Automotive	Simple	APPROVED	Dec 12, 2023, 11:09:48 AM

Channels

- Store administrators can create multiple channels, each representing a different customer experience (e.g. B2B, B2C, B2X)
- Channels can be linked to Liferay Sites or you can use Liferay's Headless APIs to create native mobile applications or to integrate with external marketplaces
- Channels define default display languages and currencies, as well as default product display pages and category pages
- For transactional sites, Channels define payment, shipping, and tax configuration



Part 06

Personalization and Experiences



Clarity Business Requirements

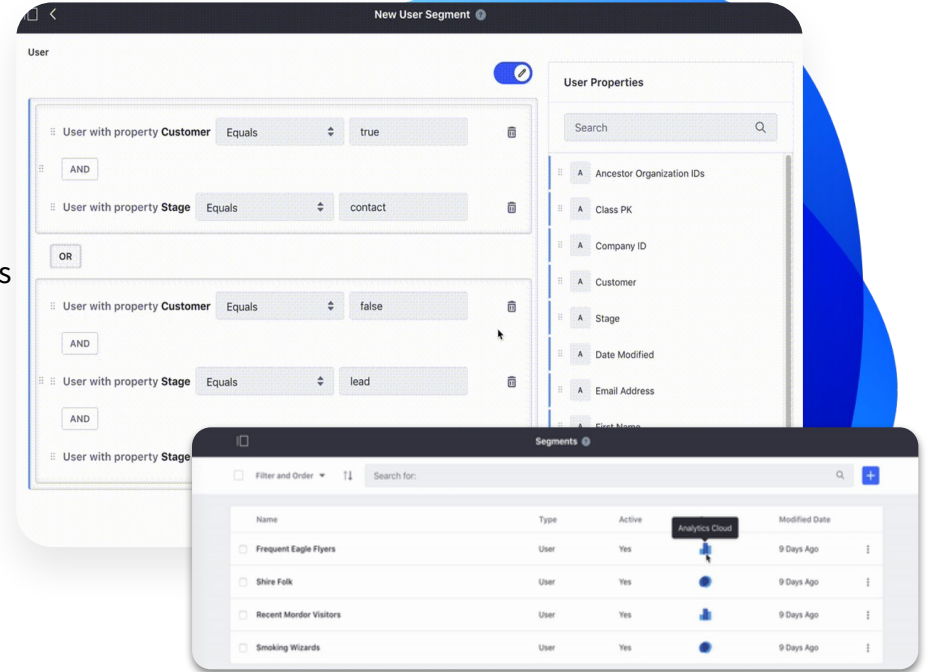
- Deliver targeted marketing campaigns based on user demographics, interests, and website behavior
- Provide new distributors with a personalized onboarding experience based on their chosen product or service plan
- Display relevant content and functionalities on the website based on a user's role
- Test different website layouts, calls to action, and content variations to identify the most effective approach for different user segments.
- Deliver location-specific content and promotions to users based on their geographical location



Segmentation Management

Create audience segments based on user and organization attributes, as well as session properties and custom fields

- Powerful rule builder to support complex operations
- Segments built from Session, User, and Organization properties
- Build new Segments by combining existing segments
- Includes support for Custom Fields
- Integration with Liferay Analytics Cloud – adds support for long-time behavior and 3rd party (e.g. Salesforce) data
- APIs for custom property creation



Personalized Experiences

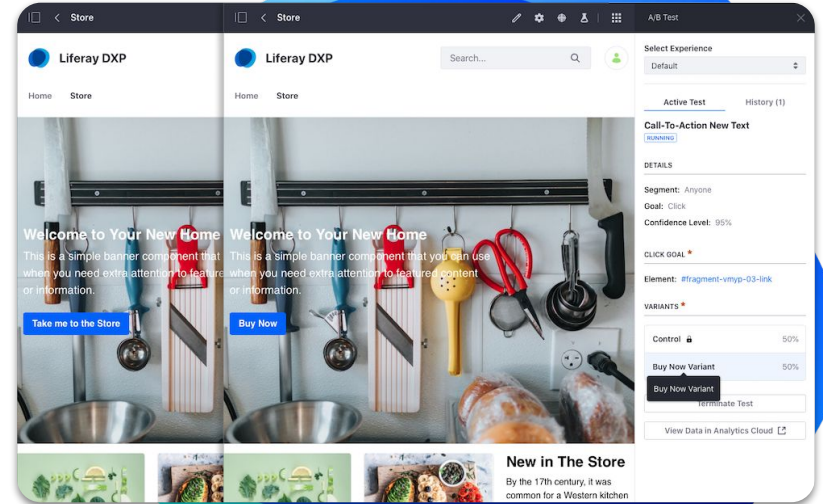
- Easily personalize anything on a page for different audience segments
- Personalize pages by creating an “Experience” for each Segment
- Personalize Images, Text, Fragments, Navigation
- Hide and show only elements/content that is relevant to the segment
- Create rules that are specific to different breakpoints (screen sizes)
- Customize Navigation and Widgets
- Use simulation capabilities to view/validate the different experiences by toggling between segments



Measuring and choosing the best outcome

A/B Testing

- Allow marketers to create and run tests
- Enable them to determine the optimal option to drive visitor behaviour
- The A/B test automatically synchronizes with Analytics Cloud
- Start or terminate the A/B test in Liferay DXP
- Liferay DXP and Analytics Cloud show your test's status and the results of the variant
- You manage other aspects of your A/B test in Analytics Cloud (test history, statistics, variant performance, etc.)





Content is king, and Liferay is your crown.
Take control, tell your story

Thank you