

# WHITEPAPER

# LAGO CORE

Bringing everything together - our main module

**The heart of LAGO is our CORE license which brings everything together in our PIM module, our WORKFLOW module, our LAGO FS file system and our LAGO MAM module. These modules form the main backbone of any LAGO implementation.**

## **Product Information Management**

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**LAGO PIM is a central component which includes aggregating all product and non-product related content necessary to feed all channels of your multichannel strategy. Besides traditional PIM functionality like product enrichment, LAGO PIM offers a unique variant model that allows to distinguish data on any level from a global to a local view.**

### **Central product data repository**

The centralized data repository of LAGO allows to store all product and non-product related content. The product data structure is configurable by a graphical user interface in LAGO Admin and allows to create your own product types, attributes, prices, article references and catchwords.

Product attributes allow different data types including standard types like string, integer or float as well as menus, which can be closed, open or hierarchical. For more details, product attributes can have attributes themselves. Attributes can be structured within categories and restricted in visibility by user group for every category if needed. In case the data is being imported from an upstream system, read only attributes are available allowing you to only view and use data within LAGO.

To find data, LAGO PIM offers a powerful search engine which allows to either perform a quick full-text search or a configurable search by combining multiple search attributes. Search attributes can be a combination of product metadata as well as campaign information. To browse data, search filters can be configured which also provide threading of products by metadata fields.

### **Global or local – The unique and fully flexible LAGO variant model**

A unique feature of LAGO PIM is the fully flexible LAGO variant model. As an example, the variant model allows to differentiate the values of each attribute for each variant individually. A variant can be used and configured flexibly to represent a country version, a language version, a regional version, a store version or a customer group version. Since the variants of LAGO are generic, any form of segmentation is possible including combinations.

By using LAGO variants, it is possible to define regional names for products, customer group specific content or just simple translations of content.

### **Distributed data pools for output**

To distribute data among various output channels, LAGO PIM can create additional data pools for each output

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channel into which products are copied and referenced to allow a reduced view of data for users working only in specific channels (e.g. a product manager wanting to only view and maintain product information for a specific web shop).

To keep data aligned between various data pools an automatic data synchronization can be used to define for each attribute individually whether a change within the centralized data pool should be automatically synchronized into other data pools. The data synchronization allows different levels of synchronization to either synchronize data among different pools but only for the same language or only within a specific data pool to allow output specific values for attributes.

### **Direct integration of data into Adobe InDesign**

In case the LAGO InDesign plugin is used, data stored within LAGO PIM can be directly accessed by a graphic designer within Adobe InDesign allowing automatic updates of product information or pricing. The interface between Adobe InDesign and LAGO PIM is bi-directional, meaning that changes being performed in InDesign can be pushed back into the centralized PIM data repository. Which data is being pushed back can be configured for each attribute individually.

### **Features**

- Centralized product data repository
- Categorization of products with multi-level classification
- Configurable data structure for product types and product metadata
- Product type specific attributes
- Attribute type inheritance
- Categorization of product attributes
- Product attributes with closed menus, open menus, menus with multi selection or hierarchical menus
- Scripted product attributes for calculations and handling of business logic
- Attributes within product attributes
- Product keywords
- Unique and fully flexible LAGO variant model allowing to distinguish content like attributes by country, language, region or store level
- Additional product repositories for output structures including data synchronization configured as detailed as attribute level
- Configurable product filters including threading by attribute
- Flexible search engine including full text search
- User access restriction on product attribute level
- Configurable directional or bi-directional product references
- Automatic creation of product references based on rules

- Grouping of products into promotions
- Grouping of promotion into group promotion
- Non-product related content objects
- Product preview based on HTML templates
- Free configurable product workflows by using LAGO Workflow
- Direct link between products and assets by using LAGO MAM
- Direct usage of product data within LAGO Whiteboard
- Bi-directional integration of PIM data into Adobe InDesign by using LAGO InDesign plugin

## **LAGO WORKFLOW - Bring it all together**

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**LAGO Workflow is the backbone of every LAGO production. It allows to connect users or user groups as well as internal or external departments and stakeholders together within a production process. LAGO Workflow allows you to streamline processes and ensure that tasks are finished on time while also structuring the communications and adding transparency.**

### **Workflows, time plans, statuses and tasks**

LAGO Workflow allows the creation of multiple individual workflows. The creation itself is done with an easy to understand graphical user interface within LAGO Admin. Every workflow can have an unlimited number of statuses representing stages and milestones within your production workflow.

Each status within a workflow can have one or multiple tasks assigned to it. The recipient of a task can be a single user, a user group or a role. Each task itself can have a status assigned to it that defines which status the object will move to when the task has been finished. Moreover, detail descriptions can be added to a task to help users in their daily work. Once all tasks of a status are marked as done by users, the workflow engine will automatically move to the following status.

To ensure that users of different departments do not interfere with each other's work, one or multiple roles can be assigned to each workflow status resulting in only users which have that role(s) being able to perform actions.

Besides statuses and tasks, each workflow within LAGO can have one or multiple time plans associated to it. A time plan defines the allotted time for each status within the workflow. Based on the time plan, LAGO will automatically calculate due dates for every status of a workflow once it has been assigned to an object.

### **One engine, multiple ranges of application**

LAGO Workflow can be used for different objects within the system. For a PIM based workflow which focuses on each product individually, a product workflow can be configured. For a MAM workflow, an asset workflow can be configured. To ensure a flawless production of digital or printed flyers, circulars or catalogs, a document workflow can be configured.

Each of the available workflow types follow the same generic structure of workflows, time plans, statuses and tasks

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while having special functionality available depending on the object type used.

### Automatic event triggering

If a status within the LAGO Workflow is reached or complete, a wide range of automatic events can be triggered. It could be an automatic export of product data to a webshop system once a product has been approved, or the automatic prefetch of files from a centralized LAGO FS instance to an external satellite, or the export of a PDF document ready for print in a document workflow, LAGO Workflow will help you to automate these tasks.

### Combine with LAGO Reports for higher transparency

By streamlining the production process with LAGO Workflow and ensuring that one way of communicating and resolving tasks is being used, a variety of options for reporting is opened up. To add transparency to complicated production processes LAGO Workflow can be combined with LAGO Reports to give more insight on resources allocated and time spent.

Example reports may include answers to the questions of how many proofing cycles were used in the production of digital or printed flyers, circulars or catalogs with a drill down to individual pages or departments. If adding the module LAGO Proof to the mix, reports are possible showing how many annotations per page and department in relation to each proofing cycle were added and resolved.

### Features

- Easy configuration of multiple and individual workflows by graphical user interface within LAGO Admin
- Time plans for scheduling and usage of due dates
- Assignment of roles to statuses to ensure no interference of different departments
- Sequential or parallel tasks assigned to single users or user groups
- Optional external notification by email
- Counting of loops for reporting
- Product Workflows, Asset Workflows and Document Workflows
- Automatic event triggering like verification check runs or export tasks
- Combination with LAGO Reports for higher transparency

## LAGO File System

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**LAGO FS (LFS) is the built-in intelligent file storage system of LAGO. LAGO FS stores files such as assets, InDesign documents or e-proofs in an optimized structure that allows physical separation of the database and the file storage (e.g. on a NAS/SAN). All LAGO applications handling files are working (indirectly) with LAGO FS. Communication between the applications and LAGO FS is encrypted and requires authentication and authorization.**

### Centralized storage

LAGO FS is a part of the LAGO Application Server (LAS) which requires no administrative tasks once installed and configured. The storage itself can be physically located at a different location than the LAS.

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When working with LAGO and importing or changing files such as assets or InDesign documents, all LAGO applications ensure that the files are always written back into the centralized LAGO storage allowing for centralized backups of all data.

### **Distributed storage for multi-site environments**

In case of multi-site environments (e.g. a headquarter with multiple subsidiaries using LAGO or connecting external production agencies to LAGO) LAGO FS is capable of using multiple storage locations which work as satellites for the centralized storage. Each location can have its own LAGO FS instance which is connected to the centralized LAGO FS instance.

When using multiple instances, LAGO FS can automatically synchronize files either immediately or on a scheduled basis between different locations. All files imported or changed on a satellite LAGO FS will always flow back to the centralized storage. From there it can be distributed to other satellites if needed. In case a LAGO user at a satellite location requests a file not currently available in the satellite, LAGO FS will pull the file from the centralized storage.

To ensure that external locations have all data available in the local LAGO FS instance, LAGO FS allows a prefetching of files (e.g. once users are done with planning at headquarters triggering an external agency to start their work, a prefetch can be configured to transfer data to the external agencies location as soon as the tasks are finished at headquarters).

### **Features**

- Centralized and encrypted file storage
- Physical separation of database and file storage
- Distributed file storage with master and slave logic for external locations

### **LAGO MAM - Built in Media Asset Management for easy access throughout your production**

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**LAGO MAM provides digital media asset management fully embedded into the LAGO production suite. Every application of LAGO has direct access to LAGO MAM to either import or export assets, modify the asset or its metadata, utilize an asset workflow of LAGO Workflow or to assign assets to other objects in the system such as products or documents.**

### **Structured for production – Asset types, asset metadata and keywords**

To ensure a smooth production and high-quality output to downstream systems, LAGO MAM allows to structure assets by using asset types (e.g. "Product Images" and "Logos") and metadata. Each asset type can have an unlimited number of attributes configured allowing to further distinguish single assets within a type. By adding keywords from a general pool, finding assets within LAGO becomes easier as well as enhancing searches in downstream systems.

## **Connecting the dots – Assign assets to other objects**

Once assets are imported into LAGO MAM and available, they can be assigned to other objects such as products or documents. Assigning assets to products, for example, is done by a simple drag and drop action either for single products/assets or a bulk selection.

If assets should be assigned based on rules or attributes, LAGO MAM offers a configurable engine for automatic asset assignment. Examples would be assigning a “2 year warranty” logo to every product that has an attribute saying that this product has a 2 year warranty or assigning an asset showing multiple products to all single products by using an article identifier like an article number or GTIN.

If multiple assets are assigned to an object, the priority of assets can be changed by defining an object specific asset assignment order.

## **Full integration into LAGO applications**

The LAGO MAM is fully integrated into every LAGO application that either deals with product or asset data. Product managers within the LAGO PIM can see assets which are assigned to a product and from there, directly see all asset details. Graphic designers working in Adobe InDesign with the LAGO InDesign plugin can directly place imagery on a document without having to mount external volumes or use other applications.

## **Define access, visibility and usability restrictions**

Having different departments and users connected within the LAGO production environment that allows direct access to LAGO MAM can result in users being able to see or use imagery that may be restricted in visibility, editability or usability.

To prevent assets being used that are not yet approved, are no longer valid or restricted to specific departments, LAGO MAM offers a wide range of restriction access to assets. While the usage of an asset can be restricted by validity dates, the visibility and editability can be adjusted by assigning single users or user groups to an asset.

## **Powerful search engine**

The search engine of LAGO MAM allows a wide range from either a simple full text search to a combination of search criteria. When using search criteria, users can combine information that describes the physical file of an asset (e.g. “file size” or “file format”), any kind of metadata (e.g. “asset type” or “workflow status”) or information that is not directly related to an asset but to a product to which an asset is assigned.

In addition, information of an asset that is being used within production can also be combined such as the placement of an image within a specific print publication or the assignment of an asset to a specific shop category.

## **Easy access for external users**

Having all of your assets stored within LAGO MAM will lead to external users who are not part of the production process within LAGO requesting imagery. To allow easy access to assets, a web-based application is available that uses the powerful LAGO MAM search engine to find assets.

Once a user has found assets that are needed for external purposes, the required assets can be placed into a shop-

ping cart for download. Depending on user rights, a user may download an original file or only a preview of it.

## Access LAGO MAM by using the LAGO API

Asset files and asset metadata being stored within LAGO MAM is accessible by using the LAGO API. Up- or downstream systems have access to same powerful search engine by using the LAGO API as well as being able to request asset metadata or the file itself.

### Features

- Fully integrated digital media asset management
- Manage asset files and asset metadata
- Access to assets from every LAGO application including the LAGO InDesign plugin for easy access
- Creation of download carts for external access by using the LAGO web client
- Powerful search engine allowing the combination of asset and product metadata
- Full text search within metadata
- Access to LAGO MAM by using the LAGO API
- Assign assets to objects within the system such as articles or documents
- Manage assets in structured asset types
- Configure additional metadata attributes for each asset type
- Assignment of keywords to assets
- Restriction of the visibility and editability of assets on user and user group level
- Restriction of usability by validity dates
- Combine with LAGO Workflow for asset approval workflows
- Automatic quality check during asset import
- Bulk import by using hotfolders or XML tickets
- Direct check-out/check-in to Adobe Photoshop, Illustrator or other applications
- Automatic creation of derivatives upon export to downstream systems
- Automatic creation of low-resolution derivatives for internal usage such as layout images or preview files
- Support of XMP/EXIF metadata
- Support of all relevant image formats for media production
- Support of Office documents
- Support of audio and video files

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# LAGO ARCHIVING

Comply with legal archiving requirements without warehouses full of print

**Many clients struggle with archiving due to the legal guidelines. Most companies are obliged to keep flyers in an archive for at least 5 years. Today, this is usually done in the form of printed copies that are stored in a warehouse. LAGO Archive solves this problem and frees up space in your warehouses utilizing our digital archiving of the printed version with full text search.**

The legal archiving requirement does not necessarily mandate that the archive is stored in paper format. The challenges of overfilled archives is still a reality in many companies. We offer a better solution. With LAGO Archiving, Comosoft enables a digital archiving approach that is far superior to all other document management systems.

## **Completeness and structure instead of mass confusion**

With LAGO Archiving you have everything in one place and from one central source, complete and with additional advertising and product information. Tedious long searches of drives and systems are now a thing of the past. LAGO Archiving generates a PDF from every variant and every document of a project and captures this PDF as a searchable PDF. The PDF is automatically stored in LAGO FS and will never be lost!

## **Don't search, just find!**

You can freely define which information (product information such as article number, article name, advertising copy and more) that should be used as search parameters in the LAGO system.

This is a decisive advantage compared to most other classical document management systems. In those systems, you not only have to ensure that the PDF files are available for every printed version of a flyer or catalogue, but you also have to enter and store additional information for retrieval for every PDF. This is not only time-consuming, but also error-prone!

If the index search is activated and affected fields are marked as indexable, you can choose whether the values of the respective indexed field should be retained when the project content is deleted, or the project is set to the status „Archive“. This makes it possible to find these values without the content continuing to exist in the database.

## **Performance and Space in the Database and in the LAGO FS**

Projects already archived in LAGO can be set to the status „Archive“. If this project status is set, all contents of the project are deleted so that only data records at project level and project variant level remain. The PDF can still be searched and opened via the data records. Of course, the fields marked as „archive search“ are also retained, so that the search still functions completely.

The deletion of data records that are no longer required creates space in the database as well as in the LAGO FS, since documents, thumbnails, correction documents etc. are deleted and only the PDF is stored.

Once stored in the central configuration, it is now permanently possible to archive projects. Many of our major customers not only save considerable resources in hardware, but also are reducing the environmental impact using the the paperless archive and the reduced storage space costs.

If you want to permanently delete something, you can do so automatically with our programmed time functions to delete your archive at some point in the future.

You'll never have to worry about whether you have archived the latest version of a flyer and whether all variants are complete.

LAGO Archiving is ideal for eliminating physical archives and manual searching and enables you to quickly finding the flyer you want!

### List of Features

- Archiving of complete projects in LAGO - Automatic compliance with legal retention periods
- Time savings through fully indexed search within the archive reduced impact to the environment
- Save resources by saving paper costs
- Save costs for space in the warehouse
- No need to walk around and manually look for archived documents

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# LAGO ASSET ORDERING

Direct orders and asset management

**LAGO Asset Ordering is a comprehensive feature set used to order and manage product photography request directly in the system. When orders are created, LAGO generates a placeholder asset that can be placed by graphic artist on the InDesign page, while the asset order is queued up for processing. Once the asset order is completed, upon import of the completed asset in the system, LAGO will automatically swap the placeholder asset used on the InDesign page with the finished photographed asset so that the graphic artist does not need to hunt and find the asset. This process will also flag the asset order as being “completed” within the Asset Order UI.**

The LAGO Asset Ordering feature also includes a digital Rolodex for managing “Photo Studio” and “Supplier” information plus capabilities to send “photo order” notifications with detailed photo and supplier briefing information via an email to responsible photo studios and suppliers configured in the system. Additionally, users, such as a photo studio staff, can view a queue or list of asset orders directly in the system for easy maintenance of daily activity and requests via the Asset Order UI.

## Key Features

Asset orders can be managed and created in LAGO Explorer or LAGO Web.

Orders can be made from an article context, element context, or have no context.

Orders made from article or element context will auto assign themselves to the data entity (asset assignment).

Creating an asset order generates a placeholder asset to be used on InDesign page while the asset order is queued for processing

Up to 10 customizable user fields for asset orders

Up to 2000 character limit for populating “Photo Studio Briefing” and “Supplier Briefing” information when generating an asset order

Asset orders are integrated with asset types, asset workplans, and timeplans configured in the system.

Admin have the capability to limit the available asset types for specific asset orders.

Asset order list is sortable by column/row (By project, "orderer", status, user field, etc.)

Asset order list included filters, such as, "all", "my asset orders", "asset orders of this document", "asset orders of this project", "asset order of selected assets".

Asset order list can be exportable out of system

Integrated digital Rolodex library for managing Supplier and Photo Studio information.

Ability to "Favorite" a supplier for quick access

Configurable email notification templates for notifying Photo Studios & Suppliers of asset orders

Supports email confirmation upon completion of asset order to user or workgroups

## Benefits

One stop shop for asset ordering, eliminating the need of multiple spreadsheets and manual email write-ups for photo requests

All data for asset orders are reportable and exportable from database

Creating an asset order creates a placeholder asset that can be used for design/layout. Eliminating the need to hunt and gather completed assets since we replace the placeholder asset upon completion of the order.

Automatically associate assets to article or elements when generating an asset order

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# LAGO DAM

Built in Digital Asset Management for easy access throughout your production

**LAGO DAM module provides digital media asset management fully embedded into the LAGO production suite. Every application of LAGO has direct access to LAGO DAM to either import or export assets, modify the asset or its metadata, utilize an asset workflow of LAGO Workflow or to assign assets to other objects in the system such as products or documents.**

## **Structured for production – Asset types, asset metadata and keywords**

To ensure a smooth production and high-quality output to downstream systems, LAGO DAM allows to structure assets by using asset types (e.g. “Product Images” and “Logos”) and metadata. Each asset type can have an unlimited number of attributes configured allowing to further distinguish single assets within a type. By adding keywords from a general pool, finding assets within LAGO becomes easier as well as enhancing searches in downstream systems.

## **Connecting the dots – Assign assets to other objects**

Once assets are imported into LAGO DAM and available, they can be assigned to other objects such as products or documents. Assigning assets to products, for example, is done by a simple drag and drop action either for single products/assets or a bulk selection.

If assets should be assigned based on rules or attributes, LAGO DAM offers a configurable engine for automatic asset assignment. Examples would be assigning a “2 year warranty” logo to every product that has an attribute saying that this product has a 2 year warranty or assigning an asset showing multiple products to all single products by using an article identifier like an article number or GTIN.

If multiple assets are assigned to an object, the priority of assets can be changed by defining an object specific asset assignment order.

## **Full integration into LAGO applications**

The LAGO DAM is fully integrated into every LAGO application that either deals with product or asset data. Product managers within the LAGO PIM can see assets which are assigned to a product and from there, directly see all asset details. Graphic designers working in Adobe InDesign with the LAGO InDesign plugin can directly place imagery on a document without having to mount external volumes or use other applications.

### **Define access, visibility and usability restrictions**

Having different departments and users connected within the LAGO production environment that allows direct access to LAGO DAM can result in users being able to see or use imagery that may be restricted in visibility, editability or usability.

To prevent assets being used that are not yet approved, are no longer valid or restricted to specific departments, LAGO DAM offers a wide range of restriction access to assets. While the usage of an asset can be restricted by validity dates, the visibility and editability can be adjusted by assigning single users or user groups to an asset.

### **Powerful search engine**

The search engine of LAGO DAM allows a wide range from either a simple full text search to a combination of search criteria. When using search criteria, users can combine information that describes the physical file of an asset (e.g. "file size" or "file format"), any kind of metadata (e.g. "asset type" or "workflow status") or information that is not directly related to an asset but to a product to which an asset is assigned.

In addition, information of an asset that is being used within production can also be combined such as the placement of an image within a specific print publication or the assignment of an asset to a specific shop category.

### **Easy access for external users**

Having all of your assets stored within LAGO DAM will lead to external users who are not part of the production process within LAGO requesting imagery. To allow easy access to assets, a web-based application is available that uses the powerful LAGO DAM search engine to find assets.

Once a user has found assets that are needed for external purposes, the required assets can be placed into a shopping cart for download. Depending on user rights, a user may download an original file or only a preview of it.

### **Access LAGO DAM by using the LAGO API**

Asset files and asset metadata being stored within LAGO DAM is accessible by using the LAGO API. Up- or downstream systems have access to same powerful search engine by using the LAGO API as well as being able to request asset metadata or the file itself.

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**Features**

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- Automatic creation of low-resolution derivatives for internal usage such as layout images or preview files
- Support of XMP/EXIF metadata
- Support of all relevant image formats for media production
- Support of Office documents
- Support of audio and video files

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# LAGO DIGITAL OUTPUT

For the publication of online interactive digital circulars and digital catalogs

**The LAGO Digital Output is an extended channel feature set designed to manage and output content for the publication of online interactive digital circulars and digital catalogs.**

## Overview

This module generates JPEGs or PDFs of LAGO InDesign pages along with an accompanying XML file that contains hotspot overlay coordinate information as well as information on the project, its' variants, and product/offer details.

A dedicated palette in InDesign enables users to create, manage and modify hotspot overlay coordinates directly on the InDesign page. Gallery assets (images, videos, logos), and text for each product/offer are automatically exported along with the resulting JPEG/PDF and XML file. The LAGO Digital Output module can also be configured to fully automate the creation of hotspot overlay coordinates and assignment of gallery assets.

## Key Features

Automatic and/or manual creation of hotspot overlay coordinates

Automatic generation of XML and JPEG/PDF for the selected page based on workflow status

Structured XML file contains the following information:

- Project data fields/properties

- Project variant data fields/properties

- Document details and product/offer assignment

- Hotspot overlay coordinates with product/offer association

- Product/Offer information with attributes, prices, and asset assignments

Automatic and manual assignment of gallery assets and component text associated with products/offers

Configurable export definition (which data fields should be part of Digital Output's XML)

Supports versioned and LAGO compressed pages

Output store codes associated to project variants for downstream mapping

Dedicated palette in InDesign for overlay, gallery asset, and main text management

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# LAGO DIM

Production of personalized and custom print and digital media

**The add-on module DIM (Direct Individual Marketing) from LAGO lets you sharpen the focus of your targeted marketing activities for your customers. After more than 20 years of providing “One-to-Many” and “One-to-Few” through the unique variant model, LAGO DIM now provides you with a “One-to-One” output option for both digital environments as well as print channels. Reap the benefits of personalized and custom advertising to offer your customer base relevant products and to attract attention to your offerings.**

## **Personalized and custom print offerings**

Using LAGO DIM, you can produce personalized and custom print pages. Varying levels of customization are available, ranging from simple personal forms of address, including references to individual shop landing pages up to individual products and prices per customer or customer group. You can opt to offer your customers personalized pages which can be added fully automatically by using designed pages from the powerful LAGO template engine. To produce an even higher quality print product, LAGO DIM also includes an option that allows the user to design individual products in Adobe InDesign and also add them to the final print page. There is thus no recognizable difference on the final page between designed products and products added individually.

## **An easy road from “One-to-Many” or “One-to-Few” to “One-to-One” for the print channel**

The road from “One-to-Many” or “One-to-Few” is easier than you’d think. The pages already created based on the LAGO variant model can easily be used as the basis for future personalized and custom print pages. You simply define an area on the pages to which individual products can be added. LAGO DIM then adds them to the page already created. With this procedure, you can test customized pages with a select group of customers to gain insights and obtain results.

## **Cross-channel references from print to digital channels**

By permanently referencing products on print pages with LAGO PIM you can create links from printed pages to digital channels fully automatically. Whether you fall back on QR codes or image recognition via smart phone or tablet app is up to you. In both cases, LAGO DIM lets you code a customer URL for each customer or customer group to link to personalized and custom landing pages.

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### **Personalized and customer emails and landing pages**

With LAGO DIM you can also directly add products from LAGO PIM for personalized and custom emails and landing pages. LAGO DIM will handle the processing of address data, template generation as well as the production of emails and landing pages. The dispatch of emails and the hosting of the landing pages can then be handled by an email service provider of your choice.

To better be able to track from where a user was directed to your shop, you have the option of using a different landing page for emails than for print pages.

### **List of features**

Production of personalized and custom print pages based on templates or individually designed products

Use of structured LAGO documents as the basis for the leap from "One-to-Many" or "One-to-Few" to "One-to-One" by combining existing pages with personalized and custom offerings

Cross-channel referrals from the print page to digital channels based on image recognition or QR codes

Template editor for HTML content

Generation of personalized and custom emails and landing pages based on product data from LAGO PIM

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# LAGO E-COMMERCE

Process your product data for the E-Commerce channel.

**LAGO E-Commerce processes your product data for export to the E-Commerce channel. LAGO has various functions for the channel-specific processing and exporting of product data, images, copy, etc. This whitepaper addresses the E-Commerce solution in LAGO Enterprise System, identifies the advantages of a holistic solution using specific examples and focuses on the interaction of different LAGO modules to create a Best Practice solution.**

## **Shops & Product Allocation**

To deliver channel-specific content to your webshop, the products are processed in a specified project and allocated to a shop structure. Shop folders in LAGO typically reflect the webshop structure and are set up in a hierarchy. Shop hierarchies can be across several projects or defined specifically for each project. If you are running webshops in several countries, they can be served from a single project, and the shop structures in this case are specific to a country or language. You also define validity periods for individual shops, for example, for campaigns in the webshop that are available for a limited time only. The products are easily allocated to the respective shop folder by drag & drop operations or automatically by means of rules. Automatic allocation of products to shops is based on rules that can be applied individually to each shop folder.

## **Export formats**

Product images are classically stored in LAGO in print format for print production. Instead of processing product images for the shop system in a later process for each export, they can now be converted automatically into the right export formats for export to the webshops from LAGO. This is an easy and fast way of producing and exporting different formats of the product images in the LAGO system. If your media are processed in LAGO DAM, the next time you export the media you receive the new export formats written by LAGO.

## **Cropping functionality**

Do you need selected excerpts or close-ups of product images to highlight your products in the webshop? Use the LAGO E-Commerce cropping functionality. Produce media variants by making a free selection or choosing pre-defined templates without using image editing programs. The actual image processing takes place automatically in the background using our built in tools.

## Media-neutral product copy including placeholders

Product copy is needed for print production and for internet export, but they are often completely separate. In LAGO, you can create media-neutral product copy. LAGO makes sure you get your copy in the corresponding format export once you have selected the channel-specific use or export. Mark sections written in HTML, for example, which are not to be printed or only advertise certain parts of the text in your webshop export. Text can also just as easily be created in the PIM project and then be copied for a specific project and channel. With LAGO you have the advantage of production supported by a database and can add placeholders to the text with LAGO. This lets you always keep prices, attributes and other product information in your copy up-to-date.

## WebPreview

To review copy and images of the processed products in a standard webshop site prior to the actual export, LAGO E-Commerce has a WebPreview function. Check text lengths, attributes or price information in a preview with the help of individual templates.

“ EVERYTHING FROM A SINGLE SOURCE (PROJECT) ”

## Combine Functions & Features

Use the advantages of a master data project and serve different export channels from a project. Create and maintain attributes, copy, media, etc. and serve your print and E-Commerce project channels from a central project. You only need to adapt your copy instead of rewriting them for every export channel.

## Create structures

By classifying articles by type, you create clear structures. You define the necessary attribute allocations for these article types. In conjunction with the rule-based shop allocation described above, products are easily and quickly added to the shop hierarchies.

## Define your own workflows

Use the advantages of the LAGO Workflows and use the LAGO system to manage the creation and maintenance process for your products sustainably. You always know what needs to be done and the progress of product data maintenance by using the scheduling overview in the form of LAGO Reports. Integrate an image order process, for example, or the correction workflow for product managers. Assign rights and tasks for each workflow step to guarantee effective work on the product and to avoid repetition and loops.

## Combine the advantages

Easily combine the advantages of different modules and functions in LAGO and integrate the most efficient production process. Process your products in a master data project in a workflow designed to meet your needs. All departments are involved in the digital correction process - on the same database in one system. Missing images can be ordered and necessary details defined. Create product copy independent of the export channel, integrate required tables and use placeholders of attributes or user-defined fields.

Add product data or just maintained content to channel-specific projects. Adapt the copy as needed, create layouts for print or assign keywords. Create your projects in the workflow that is best for the corporate processes and manage order dispatch and automatic export in Print and E-Commerce.

## List of Features

- Text processing independent of channel
- Channel-specific export of text and media
- Use of placeholders in copy
- Calculated fields and attributes in copy
- Definition of export formats for images
- Export via XML exports (full/diff)
- Integration of post-processes after export
- Create image details without image editing programs
- Global and variant-specific shop structures
- Shop folder structures with periods of validity
- Freely configurable fields at the shop folder level
- WebPreview for a fast preview of product content

# WHITEPAPER

# LAGO ePAPER

Digital product catalogs including linking to a webshop

**The LAGO ePaper is our main cloud solution for managing and generating online catalogs. Existing PDF catalogs can be made accessible in the cloud and integrated. Our wizard lets you automatically link articles in your webshop. This gives you the option of sharing catalogs for specific target groups as needed with the customer. Existing catalogs and flyers produced with LAGO can also be imported into the online catalog with a direct article link – without additional effort. This means you benefit twice from the work you only have to put in once.**

Producing an ePaper is fast and easy: Drag & Drop the completed PDF into a hot folder, select the processing profile and generate your final ePaper. There's no easier way to create an ePaper unless you use our upstream PIM system.

## Wizard-guided for results

A wizard guides you reliably and efficiently as you import your online catalog details. Use it to define hyperlinks and their structure, generate cross references and pre-define web previews for views of article details. You can save the settings for future use.

## Hot folders instead myriad of applications

Hot folders can also be defined using the generation profiles saved in the wizard so your advantage is you only make your settings once. This means you can generate online catalogs directly **and schedule for a future update** and publish them on the website without having to actually do anything. This saves time, improves the reliability of the process and ensures that you always provide the customer with the most current information. Simply place the PDF you generate into one of the folders you've defined and we do the rest.

## Features

- Responsive design on all devices
- Look-and-feel of print publications
- Shorten the time-to-market
- Linking to webshop(s) possible
- Reduce errors with PIM support
- Saves resources thanks to the additional benefits of additionally using print advertising media
- Article number recognition and automatic linking (wizard)
- Full-text search
- Mark, save, print individual or double pages
- Realistic page turning
- Definition of clickable areas
- Direct selection of pages
- Product previews from the webshop

# WHITEPAPER

# LAGO HISTORY

Track changes to guarantee high data quality

## **LAGO History**

The LAGO History module allows you to track history changes, such as, inserts, deletes, and field updates on the project, project variant, raster, document, element, component, article, article assignment, and price data entity levels. The end result is a complete overview of who made the change, the date/time of change, plus additional details to provide supplemental context.

This module is highly configurable thus allowing each LAGO installation complete control over which history triggers can be set for which fields and data entity.

Once the configurable history triggers are set, then history data will be tracked in dedicated history tables within the LAGO database and also viewable in a dedicated History UI for any selected LAGO project. To cleanup outdated history table entries, a configurable cleanup service for purging history results beyond a specified timeframe can be executed on a scheduled basis through the LAGO MessageBus.

Additionally, history deletion results can also be included in the LAGO XML export for updating external peripheral systems like web shops.

## **LAGO Redlining**

As an extension of the LAGO History module, the "Redlining" feature explicitly keeps a history of text components stored in the database and highlights changes by comparing one text component version to another.

The different versions of text components are saved in the database and are displayed for comparison in a window: the current version on the right and the version it is to be compared to in the history on the left. By displaying two different texts next to each other, this allows for a fast and easy way to view changes. A forward or backward arrow lets you display older versions. When comparing text component versions, changes can be highlighted with definable colors to show newly added text, removed text, format changes, and placeholders.

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LAGO HISTORY

**List of Features**

Configurable triggering mechanism for controlling database entities and fields for history tracking. We currently support the following data entities:

- Project
- Project Variant
- Raster
- Document
- Element
- Component
- Article to Element assignment
- Article
- Price

Easy to use History UI for viewing history data for selected projects

- Filtering capabilities for insert, deletes, and field updates
- Filtering capabilities for date/time threshold (24 hours, 7 days, data range, etc.)
- History results are exportable in XLSX format

History deletion results supported in LAGO XML export for updated external systems

Configurable cleanup service for purging history results beyond a specified timeframe on a scheduled basis

Redlining for history comparison of text components

- Comparison window with forward and backward arrow capabilities to view older history entries
- Configurable colors for highlighting newly added text, removed text, format changes and placeholders

# WHITEPAPER

# LAGO INDEX

Automatic index creation and keyword sorting of product data

**The LAGO Index module allows you to manage keywords for products in your print and online projects for the easy creation of catalog indexes with page references that automatically update and for outputting keywords into your web shop. By using imported data or by user-defined creation of keywords inside LAGO, products in LAGO can be linked to an index keyword using simple drag & drop operations.**

Index keywords can be classified under a channel and a specified language thus allowing you to create indexes for any channel or language with no extra effort! Additionally, keywords can be organized in a hierarchy structure to fit specific business rules and needs. The hours spent on reviewing and making manual changes to things, such as page references, is a thing of the past thanks to the robust solution that LAGO Index provides.

## **Administration and keyword classification**

Keyword administration is all handled inside LAGO. In addition to importing keywords, via a data file, the keyword collection can also be expanded and managed manually within the system.

There are two main levels of keyword classification for automatic adaption:

### CHANNEL CLASSIFICATION

Keywords can be classified under "channels", which is a project classification done on the project level. This allows the index information to be adapted automatically for any project based on the channel assignment of the project and the keywords that are assigned to that specified channel. This simple hierarchy allows you to make adaptations for ecommerce exports and for print index generation, an easy and automatic task when you need to make last minute changes.

### LANGUAGE CLASSIFICATION

Keywords can also be classified under languages, allowing you to version out your indexes automatically based on the language that is assigned to your project variant. This makes use cases like creating a catalog index in 7 different languages a very easy thing to do.

## **Generating Indexes for Print and Web Shops**

Generating a print index in LAGO CS and styling the index is only a matter of template work and component placement. After enabling the index function, CS users have the ability to define paragraph styles for the design of the index sections, as well as basic settings, such as the separation of page numbers within the LAGO template. Afterwards, the index component template is placed on the desired page for the auto-creation of indexes using integrated placeholder technology that is referencing the page assignment of products assigned to the keywords.

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LAGO INDEX

Depending on the channel assignment of the project and language assignment of the project variant, the index engine will reference the corresponding keywords that have been configured in the system for that channel and language, automatically.

Exporting keyword indexes for a web shop is achieved by exporting LAGO XML from the LAGO system. The list of products contained within the LAGO XML can be configured to include the keyword index assignments for ingestion into your web shop or other external systems.

### List of Features

- Channel and Language based keyword classifications
- Keyword hierarchy with sub-levels
- Import pre-existing list of keywords into system, including translations
- Manually create keywords within system
- Assignment of keywords to products & articles via simple drag and drop mechanism
- Export keywords indexes for external web shops
- Automatically generate print indexes in LAGO CS
  - Auto-format the design of print indexes using InDesign paragraph styles
  - Alphanumerical sorting
  - Define enumerator separator and range separator

# WHITEPAPER

# LAGO PRINT OPTIMIZER

Automatic print order planning and optimization

## **Automatic print sequence planning and optimization**

The Print Optimizer module is the ideal solution for the „last mile“ from your production to the printer. It makes the transfer of your print data to your printer virtually fully automatic and also provides a calculation of the ideal print sequence for exchanging color and black plates. This is a considerable cost advantage for the printing of numerous regional and/or market-specific versions.

## **Manage printers and print schema**

The use of LAGO Print Optimizer is based on a basic configuration of master data information. This includes first and foremost the printers and paper formats you use. Paper formats can then be assigned to a printer. Print Optimizer also manages print schema. This includes the allocation of regional and/or market-specific versions to printers. Any number of these schemas can be created. Using schemas makes it possible to press a button to use the right schema for a number of publications which need to be printed by different printers because of the different paper formats. For example, it is possible to print a regional and/or market-specific variant to print shop A or print shop B, depending on the schema selected.

## **Automatic print sequence optimization**

At the heart of the Print Optimizer, is the automatic print sequence planning optimization. This function determines the plate changes necessary per printer based on the version to be printed (see LAGO Automatic Versioning) and sets the corresponding optimum print sequence. In the process, regional and/or market-specific product swaps, as well as, different product information such as prices are evaluated. A separate check is also run for all production information displayed on a page which vary in regional and/or market versions and are not printed in black since this would mean a four-color change during printing.

## **Manual definition of rules for the print sequence**

In automatic print sequence planning, all regional and/or market-specific versions are analyzed in the same way to determine the optimum sequence. Certain versions may need to be printed first even if that isn't the ideal print sequence. The reason is that certain versions often have to be printed first due to logistics since the **distribution** area for these versions is furthest from the printer.

### **Automatic production of output files**

The Print Optimizer module automatically generates the necessary orders based on the use of a print schema for a print publication and the corresponding allocation of regional and/or market-specific versions to printers. PDFs or PostScript documents can also be generated via an Adobe InDesign server.

Processing on the InDesign server is also fully automatic and can be scaled linearly by using several InDesign servers, thereby greatly reducing the amount of time required.

### **Direct transfer of information to the printers**

Once the optimum print sequence has been determined and the print data has been generated on the InDesign server, the print data is distributed directly to the target directories of each of the printers.

Every printer is also provided with a print sequence plan, which states the optimum order including the print files required for the actual print process. Printers can thus import the print sequence plan directly into their systems to fully automate even the last section to the printing press.

### **List of Features**

- Manage printers in LAGO
- Manage paper formats in LAGO
- Manage print schema in LAGO
- Flexible allocation of regional/market versions to printers
- Flexible management of different page counts per regional/market variant
- Automatic generation of required PDF or PostScript documents using an InDesign® server
- Automatic determination of the appropriate PDF or PostScript Presets per printer
- Automatic determination of necessary black and color changes per printer
- Automatic determination of the optimum print sequence per printer
- Definition of rules for the print sequence to account for logistical aspects
- Automatic distribution of generated PDF or PostScript documents to the target directories of each printer
- Output of a print sequence plan for a printer

# WHITEPAPER

# LAGO PRINT PLUGIN

Bidirectional data integration in Adobe InDesign for efficient print production jobs

**The LAGO Print Plugin lets you integrate your graphics department fully in your multichannel production process. The Plugin is seamlessly integrated into Adobe InDesign and supports graphic designers in their daily work with extensive and intuitive functions. The Plugin supports the entire bandwidth from absolute creative freedom to a fully automatic layout.**

## Direct integration in Adobe InDesign

The LAGO Print Plugin integrates fully into Adobe InDesign. A graphic artist can thus log on to the LAGO database via the Plugin and access all content. The integration is bidirectional, meaning that all adaptations entered by a graphic designer are automatically fed by the Plugin automatically to the database. The direct link with the LAGO database means access at any time to the latest information from LAGO Database and LAGO MAM. Prices, for example, can be updated on a page automatically and within seconds.

## Free Layout

For publications with sophisticated graphics whose look and feel are decisively determined by the work of a graphic artist, LAGO Print Plugin has an option for a fully free layout. A graphic designer thus has access to product and asset data to place them on a page using drag & drop, but is completely free in terms of designing the actual page layout without being limited in the creative work.

## (Semi-) Automatic Layout

LAGO Print Plugin has a vast set of automation tools for everything from publications that follow a graphics standard to publications that must fully conform to a standard. To build a page rapidly, layout templates (e.g. a price label or a text element consisting of different product information) are available which can be placed onto a page using drag & drop. Once layout templates are placed within the context of a product, the placeholders in the template are automatically filled with the values of the selected product.

Product templates are available to the graphic designer to plan an entire product on one page with a campaign. These templates are composed of a combination of layout templates. This way, products can be placed in different designs and sizes on one page.

The range of functions of the tools to automate the process vary between LAGO Professional and LAGO Enterprise (see „List of Features“).

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# LAGO PRINT PLUGIN

## Production of versions

All publications from the free design to the fully automatic, can be produced in versions. A separate InDesign document is reserved for each version, and the content between the versions is synchronized by LAGO Print Plugin. Producing in versions makes it possible to cover the different version types required (country-specific, personalized, region...). However, specific adjustments may be necessary for each version. At a higher level, the level of a template, rules can also be defined so that in a German version, for example, a € symbol always appears and in an American version always a \$ sign.

## Designing and managing templates

Page templates are also configured and managed with the LAGO Print Plugin in a separate administration section. The page template is generated entirely in Adobe InDesign using its functions. Information from LAGO can also be linked with the template, for example, in order to insert headlines into a page automatically. Layout and product templates are also created in the context of a page template. Placeholders can easily be integrated in a template using drag & drop. Administration of the LAGO templates is processed entirely via a GUI so that no programming knowledge is required.

## List of Features

- Fully bidirectional integration in Adobe InDesign
- Support for free layouts
- Support for template-based layouts
- Access to all product and asset data in LAGO
- Direct access to product-specific asset data within the product context
- Check in / out of assets for direct processing in Adobe Photoshop
- Asset import / export
- Placeholder technology for direct use of all PIM data in a page context
- Automatic updating of placeholder and layout content in the document
- Automatic pre-placement of product layouts based on templates
- Use of text templates
- Administration and editing of page templates directly in InDesign
- Administration of style templates using page templates
- Retrieval of pages using workflow orders
- Direct displaying of correction marks in document as part of a correction and release workflow
- Work with language or regional versions
- Manual synchronization of layouts between different versions

## LAGO PRINT PLUGIN

- Generation and administration of table templates directly in InDesign
- Placement of product tables based on freely definable criteria
- Use of table templates in product templates

### List of advanced features for LAGO Enterprise

- Support for Adobe InDesign Server
- Automatic synchronization of layouts between different versions
- Support for unlimited number of versions (LAGO Professional up to max. 50 versions)
- Sophisticated and rule-based generation of automatic layouts (see LAGO SmartLayout module)
- Rule-based selection of correct assets depending on template and publication (see LAGO SmartLayout module)
- Use of text templates, including embedded text tables
- Sophisticated multi-stage table templates, including semi- and fully automatic updates
- Selective placeholder updates depending on workflow status
- Editing of product data in Plugin
- Fully automatic layout application from old publications
- Extensive document test runs
- Support for multiple layout versions per document

# WHITEPAPER

# LAGO PROOF

Easy to use browser based proofing solution with integrated workflow capabilities

**As InDesign documents are saved in LAGO, a proof of the page is automatically generated for all users to mark-up and review in our new browser based HTML5 LAGO Proof solution. Proofs are accessible through the LAGO jobs list or standard document list and are a part of the integrated LAGO workflow with permission-based control for accessibility and task allocation. When proofs are opened in proofing area, a set of easy-to-use commentary tools are made available for each user to mark-up changes directly to the proof.**

## **Bi-Directional Communication with InDesign® page**

When corrections are marked-up and saved on a LAGO proof, the corrections are automatically linked in position and made visible to the layout page in InDesign page. This allows the layout artist and copywriters access to the corrections made during a round of proofing without having to leave their layout application. Additionally, there are a set of correction tools available in InDesign giving the layout artist and copywriters the ability to create corrections and manage corrections within the layout application. When corrections are set to done or edited, these changes are automatically made visible in the browser based LAGO Proof solution, thus allowing for complete bi-directional communication for efficient collaboration and transparent communication.

## **History Comparison**

When certified documents or snapshots of the page are generated via the workflow they become accessible in LAGO Proof for historical comparison when viewing a proof. This allows users the ability to compare corrections based on how that page looked like prior to changes being made, making it much easier to verify whether something was done correctly and for overall visual comparison.

## **Timestamp Corrections**

When a correction is created using LAGO Proof commentary tools, LAGO automatically timestamps the corrections with the username of the owner of the correction, the date/time of when the correction was made, and the document status step of the document at the time of when the correction was made. Additionally, when the correction is modified or set to done, username and date/time information are also tracked giving all users complete transparency as to who created, who last modified, and who resolved the correction.

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### Filtering Corrections List

To make it easier to filter through a list of corrections, LAGO offers the ability to filter corrections based on corrections you have created, corrections that are processed and unprocessed, corrections created by all users, corrections created on a specified document status, and corrections created by a specific primary working group. It is also possible to filter corrections based on a combination of the filtering examples, listed above. Filtered correction results can be downloaded to XLSX format for external usage and archiving.

### List of Features

- Browser based solution
- HTML5 framework
- Support multi-proof selection for proofing more than 1 page
- Easy to use commentary tools
- Integration into the workflow with task lists for selection and management of tasks
- Dedicated "Correction Supervisor" permission
- Access to certified documents for history comparison of proofs
- Print out correction document and corrections list
- Corrections list downloadable to XLSX format for archiving and external usage
- Filter corrections based on document status, primary working group, processed or not processed
- Zoom in/out capabilities
- Corrections timestamp with username, date/time, and document status from when the correction was made
- Bi-directional communication with InDesign page
- Auto-message prompt for notifying users that an InDesign document has unfinished corrections
- Correction list and correction tools available in InDesign page

# WHITEPAPER

# LAGO REPORTS

Analysis, Visualization and Aggregation of All Content in LAGO

**The LAGO Reports module enables you to display or export reports of all content and information at any level of the LAGO database. Whenever a report is generated, it contains the most up-to-date information on projects, documents, products/offers, as well as the associate workflow information. Data from external systems (that has previously been imported) can also be included alongside any of the available LAGO data. Aggregating and reporting on data in this manner allows a level of transparency unavailable with any other system.**

## Using Reports

LAGO Reports are generated by clicking a button in the LAGO Web UI or the LAGO Explorer application. Users are able to choose between two types of reports: database-wide reports or project-specific reports.

Project-specific reports enable users to view an individual project (and its contents) in LAGO, regardless of whether it's a website, email, or print project (i.e. circular or catalog). For example, reports can be generated containing:

- Status information on new products destined for any channel

- Specific groups of products on a website or print project

- Squinch analysis (percentage of page) for product/offers in a circular or catalog (requires the LAGO Squinch module)

Database-wide reports provide a global view of all data in LAGO without restriction to a specific project. These reports can offer insight into the overall planning and production process, across all sales channels, enabling close monitoring of workflow and deadlines and analysis of product/offer usage.

Both database-wide and project-specific reports can be restricted using data filters, enabling users to see only data applicable to them. For example, a basic overview report of all ongoing campaigns and their scheduling could be filtered by advertising channel or regional variant.

## Using LAGO History Data in Reports

If the LAGO History module is enabled, reports can also include historical data. For example, a report showing price changes for a product in website, or to determine where a product was/is positioned in a print project as you are building a campaign.

## Including Other Data Sources in Reports

In addition to LAGO data, data from external systems can be incorporated into reports. For example, product/

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LAGO REPORTS

offer sales volume by channel or current inventory levels, can be combined with the production information to allow limitless reporting possibilities. Data from external systems can either be imported into the LAGO database or directly linked to the report itself.

### Generating Reports

Reports are generated by SAP Crystal Reports engine, which is built into the LAGO server. LAGO Reports can be displayed directly in LAGO Web (or desktop app) or using the SAP Crystal Reports Viewer. Reports can be created/defined by customers using a Crystal Reports workstation or by Comosoft's in-house DBAs (cost would depend on complexity).

### Key Features

- Analysis, visualization and aggregation of all content/data in LAGO
- View reports directly from the LAGO Web interface or the LAGO Desktop application
- Global or project-specific reports
- Selective reports using dynamic filters
- Link to one or more external data sources
- Integration of SAP Crystal Reports
- Create/define reports with SAP Crystal Reports Workstation
- LAGO History and SQUINCH data available for reporting
- Initial deployment of Reports module includes 2 standard reports created by Comosoft DBAs

# WHITEPAPER

# LAGO SMART LAYOUT

Automate your page building process. Compress your time-to-market.

**The LAGO SmartLayout module allows you to automate your page building process by further extending the capabilities offered with page layouts, element layouts and component templates. For example, graphic elements and text can be placed automatically onto the page based on certain data conditions and they can automatically update due to downstream promotional price changes. Additionally, formatting items like the size of component frames can change dynamically based on the space allocation granted for a product or promotion. LAGO SmartLayout includes 4 sub-features, each with their own specific use cases, all of which are designed to automate your page building process for faster and compressed time-to-market execution.**

## Rule-based component placement

Rule-based component placement is based on the creation of placement rules, which are LAGO scripts written to evaluate database fields for True or False statements. The placement rules are stored and centrally managed in LAGO Admin. The placement rules are then used to determine which component template should be placed onto the page for a specified category within an element layout. An example of a simple rule is „Is there a value in the field <SRP>?“ True or False? If True, place the SRP component template. If False, don't place. Another rule may be set up in such a way that a price label with an extra spoiler is placed when the criterion „Super price = Yes“ is True. Multiple placement rules can be stacked for a single category and if the value „TRUE“ is not returned for any of the allocated rules, no component template will be placed for the corresponding category. All of these cases are just examples of the possibilities on what can be written to automate your page building process. The sky is the limit.

## Rule-based asset selection

Rule-based asset selection is also based on the principle of placement rules and follows a similar logic. These rules, however, use information from the asset level to determine the placement of assigned assets. Asset user fields and general fields for assets are evaluated and a check is ran to determine which asset to place onto the page based on the rule assigned. Users also have the option of accessing additional information at the asset level, which can be used in the placement rule scripts. This includes technical asset information such as resolution or dimensions of the asset.

## Rule-based copy placement

Rule-based copy placement allows individual „copy text template“ to be inserted inside a parent text frame with a desired order for placement. The insertion of the “copy text template” is controlled by placement rules that are assigned to each individual template. For example, depending on whether a value is entered for a data field, an entire placeholder like “bullets” can be inserted or omitted based on the condition matching a True or False condition. If the placeholder “bullets” is empty then the neighboring “copy text frames” can move up in position to fill in the

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# LAGO SMART LAYOUT

gaps. This mechanism allows your text frame to dynamically change and allows individual pieces to move up or down in position to accommodate the absence of content, all without having to manually adjust the text frame.

## Dynamic frame and position adjustment

Element layouts can be configured to dynamically adjust the sizing and position of text and image frames based on the overall size of a product's landing position in a page layout. In the LAGO Whiteboard, a product's landing position can be scaled to any size using the planning tool sets made available. Should a space allocation adjustment occur, the layout components like image frames and text frames can be automatically adapted to fit into the allocated space for the product. To elaborate on this further, it is possible to define that a text or image frame always increases in size when scaled horizontally or that a text or image frame never increases in size but only moves in position. All of these options are available and completely configurable to suit the needs of your layout rules. These adaptation and position adjustments can also be combined with rule-based component placement for even more extended automated capabilities. For example, if a placement relationship is established between 3 categories that are positioned 5mm apart vertically and the rules do not apply to the category that is in the middle, the other categories can be configured to move in a definable direction to fill in any „gaps“ produced by the absence of a category that is not placed based on the placement rule.

## List of Features

- Automatic/dynamic layout placement and auto-updates based on placement rules
- Speed up time-to-market
- Flexible and highly configurable
- Placement rules can be configured by users and stored in LAGO Admin.
- Robust library of fields available to create placement rules

# WHITEPAPER

# LAGO ePAPER

Digital product catalogs including linking to a webshop

**The LAGO ePaper is our main cloud solution for managing and generating online catalogs. Existing PDF catalogs can be made accessible in the cloud and integrated. Our wizard lets you automatically link articles in your webshop. This gives you the option of sharing catalogs for specific target groups as needed with the customer. Existing catalogs and flyers produced with LAGO can also be imported into the online catalog with a direct article link – without additional effort. This means you benefit twice from the work you only have to put in once.**

Producing an ePaper is fast and easy: Drag & Drop the completed PDF into a hot folder, select the processing profile and generate your final ePaper. There's no easier way to create an ePaper unless you use our upstream PIM system.

## Wizard-guided for results

A wizard guides you reliably and efficiently as you import your online catalog details. Use it to define hyperlinks and their structure, generate cross references and pre-define web previews for views of article details. You can save the settings for future use.

## Hot folders instead myriad of applications

Hot folders can also be defined using the generation profiles saved in the wizard so your advantage is you only make your settings once. This means you can generate online catalogs directly **and schedule for a future update** and publish them on the website without having to actually do anything. This saves time, improves the reliability of the process and ensures that you always provide the customer with the most current information. Simply place the PDF you generate into one of the folders you've defined and we do the rest.

## Features

- Responsive design on all devices
- Look-and-feel of print publications
- Shorten the time-to-market
- Linking to webshop(s) possible
- Reduce errors with PIM support
- Saves resources thanks to the additional benefits of additionally using print advertising media
- Article number recognition and automatic linking (wizard)
- Full-text search
- Mark, save, print individual or double pages
- Realistic page turning
- Definition of clickable areas
- Direct selection of pages
- Product previews from the webshop

# WHITEPAPER

# LAGO SPELLCHECK

SpellCheck with central dictionary

**Many companies face the challenge of creating and maintaining advertising copy in the highest possible quality for various sales channels. Whenever several users are working in one system, it can be especially difficult to maintain a consistently high text quality without errors in style and accuracy occurring. Give your copywriters and editors the right tool to ensure that your in-house terminology and standards are always spelled the same way. To meet this challenge, Comosoft now introduces LAGO SpellCheck, which gives you the means to provide higher quality content at every step of the process. If terms or defined words are not spelled correctly, they are highlighted for the user and a correction is proposed that can be used directly in the text editor.**

## LAGO Dictionary

In addition to a standard check, you can also integrate special words from the industry, your company, or trade lingo, such as e.g. abbreviations, through LAGO Dictionary. To make it even easier for your users, these words are added to the list and checked. Simply click the missing word and add it to the dictionary using the command „Learn word“ or remove it from the dictionary by using the function „Remove from dictionary“.

To use these functions, you need to authorize the command „Manage dictionaries“ which can be found in the list of user roles under rights management.

## Global dictionary instead of local chaos

Unlike Word, LAGO uses a global dictionary stored on the server, which is available to all users. A global dictionary puts an end to the different ways of spelling specific words since all users will work on the same database.

## List of Features

- Check the correctness of copy
- Color highlighting of misspelled words
- Proposed text changes
- Saving of additional words in the dictionary
- Global dictionary
- Authorized editing of the dictionary

# WHITEPAPER

# LAGO SQUINCH

Automatic calculation of the space occupied by products

**The LAGO Squinch module calculates the space occupied by your products down to the last pixel in any print project. „Squinch“ stands for „square inch analysis“ and is a space-based analysis. The proportionate costs can be calculated after publication using the amount of space a product takes up on a page. Additional marketing decisions can be based on a comparison of these costs to product profits.**

## The module

The space taken up by an advertised product costs money. Consequently, it is important to know which product placement proved profitable and which didn't. Comosoft's LAGO Squinch is a tool that helps you decide on the right product placement based on a solid analysis.

## Calculating the product space

A product advertised on a page consists of various elements, such as images, logos, text, tables, etc. These components can be used to calculate a product's space. LAGO recognizes overlapping space, elements of products placed in a text frame, space that overlaps margins or even clipping paths of images. The calculation is accurate down to the last pixel and the analysis' level of detail can be defined individually. We are happy to assist you in finding the right settings for your analysis.

## Relative space calculation

A product always takes up a certain amount of space in the page or double-page spread. LAGO Squinch also automatically calculates this relative space. During the space allocation process, you have undoubtedly at some point asked how much space a product takes up relative to the entire page or what is not directly product related and is only necessary for the advertising layout. In LAGO Squinch, you define how the page area is allocated to include in or leave out from the calculation images or headlines or defined page margins.

## Automatic calculation

During the page production workflow you define when the space-based analysis is run. This way you can automatically calculate all spaces for example shortly before or after completing the project to be produced.

## WHITEPAPER LAGO SQUINCH

### **Review the calculated space allocation**

The calculated values are naturally stored in the database and can be viewed, checked and analyzed. LAGO Squinch integrates into the LAGO Proof module and provides a visual display of the areas on the corrected document. Do you need to correct the relative space calculation for the products? No problem since the relative proportion for the page can be adapted in a later step.

### **Export of the space allocation**

An export of the space allocation is relevant for calculating advertising costs and analyzing product sales. The export can be controlled automatically or manually. Downstream systems compare the calculated spaces as well as the placement of their products to advertising costs and sales. If the space per article is needed, you can aggregate the export of the space allocation to the article.

### **List of Features**

- Pixel-accurate calculation of the space allocation
- Automatic space calculation in the workflow
- Calculations in LAGO can be viewed at any time
- Calculate and modify space percentage to page
- Different calculation modes
- Calculation of actual space of images with paths
- Consideration of products placed in closed groups
- Exporting of calculated spaces to other systems
- Integration in LAGO Proof

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# LAGO STICKERING

Displaying relevant data by element or page to assist in decision making

**LAGO Stickers, is a feature set that allows you to display product and item level information, like financials and inventory stats, within digital stickers that overlay on top of products and promotions of a correction document. Stickers, are accessible when a correction document is opened in LAGO Proof and LAGO Whiteboard. Data for stickers can be pulled from element, article, and article property level fields and there are capabilities to do calculations like summarization and averages based on the data that is referenced.**

There are two types of stickers that can be configured: Element Stickers and Page Stickers. Each sticker type can be configured with their own look and feel (height/width, color, font type/size) and each sticker type can display specified data and summarized data in a table-like format.

Element stickers, are created for each element and contains data for one element and all of the articles assigned to that element (items or SKUs). Element stickers are placed at the top left corner of the boundary area of placed components belonging to an element. If an element has no placed components, then its sticker is placed at the document's top left corner. If multiple stickers have the same position, then the stickers will be tiled.

Page stickers, are created for a whole document (single page or spread) and they aggregate data for all elements and articles assigned to the page or spread.

When viewing stickers, users can choose which sticker types to show or hide. Additionally, stickers can be included in the printout of the correction document.

## Key Features

2 types of configurable sticker types: element stickers and page stickers

Supports configuration of multiple stickers of same sticker type

Customized options when configuring a sticker type:

Sticker name

Default height/width of sticker

Header names for columns of data

Specifying data to show in table format. Stickers can be configured to show any data on element, article, and article property field level.

Stickers can be configured to automatically do calculations like sums, averages, show minimum or

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# LAGO STICKERING

max value, show values of specified flash article, etc..

Background colors

Font type and sizes

Stickers are accessible in LAGO Proof and LAGO Whiteboard

Show/hide sticker types in LAGO Proof and LAGO Whiteboard

Stickers can be printed out with correction document

## Benefits

Review financials and other pertinent data while proofing pages.

Configure different stickers for different use cases.

Element stickers are automatically placed at the top left corner of the boundary area of placed components belonging to an element.

Easily integrates with any LAGO workflow.

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# LAGO VERSION OPTIMIZATION

Efficient creation and management of multiple versions in your workflow

**The LAGO Version Optimization module makes it possible to reduce the creation of print versions or variants to minimize the number of variants that actually have to run through a production and coordination process. It doesn't matter on which level you produce a variant. The entire range is covered, from national to regional/market-specific to customer specific variants.**

Through the built in optimization algorithm and the resulting variants or versions, you reduce the need for interaction with a graphic designer saving valuable time and money.

## Calculation of necessary variants

The core of the LAGO Version Optimization module is the page or document compression. This compression determines which master versions or header variants are needed to complete the versioning accurately. Header variants are all variants that have to be processed and manipulated by a graphic designer because of a difference in mechanical layout from the main version or variant. A graphic designer in production only receives the orders that require interaction and are header variants for processing. The designer does not have to determine how many InDesign documents are to be created - this is a key benefit of this module.

For example, one difference is the representation of another product in a regional/market-specific variant. The algorithm proceeds in such a way that each product is evaluated by itself and the number of necessary variants is determined from the sum of all products and their variant characteristics. For example, on the title page of your print advertising medium in January, you could create different products in one variant.

„North“ and „South“, you get 2 head variants. However, if you also map another product in the variant „East“ in February, you get 3 header variants. The number of variants is therefore always based on the current data collection and characteristics from publication to publication and from page to page.

Page compression can be performed manually or automatically within the workflow. It is possible that in the first page when planning two header variants for „North“ and „South“ exist, at a later time however a further differentiation of the variants takes place and afterwards the variants „East“ and „South“ develop. However, the already existing variants and their layout remain in place even if the page is compressed again keeping them all linked together in the module.

## Dealing with price variants

In addition to the head variants, the page compression also optionally determines what we call „content variants“. Content variants identify all variants that are based on differences in data fields, such as a price. Since such data fields automatically flow into a document via the LAGO placeholder technology and are not set manually by a graphic designer, any differences lead to the creation of a content variant.

Although content variants can be viewed by a graphic designer at any time, they run automatically during production via an InDesign Server, requiring no manual intervention at the end of the production process. For example, you can automatically generate several price variants for two regional variants, „North“ and „South“, which differ from each other by a different product on the title page.

Price variants can also only be generated at the end of a production run by importing prices. This allows you to completely decouple production from the creation of regional, market-specific or individual print variants and highly automate the creation process. Of course, content variants can also result from differences in other fields. This enables you to automatically deal with regional differences in product designations. For example, you could advertise „Submarine Sandwiches (or Subs)“ in the South and „Hoagies“ in the North for the same image.

## List of Features

- Determination of necessary header variants for the graphic element(s)
- Determination of necessary content variants for differences in data fields (e.g. price variants)
- Output of all necessary variants via an Adobe InDesign Server
- Manual initiation of a page compression to determine Versions required and calculate Header Variants
- Automatic processing of a page compression triggered by a status change in your workflow
- Automatic processing of a page compression triggered by changes in the graphic element(s)

# WHITEPAPER

# LAGO WHITEBOARD (incl. Extended Feature Uplift)

Digital product placement with direct integration into the graphics program

**The LAGO Whiteboard is the main module for efficient and effective printed advertisements for drafting and filling pages rapidly even without layout experience. The results are available in InDesign as a layout document for the creative team (graphics department), whether they are in the office or offsite. The pages can then be processed professionally for printing. Whiteboard is also the ideal bridge to involve or even integrate product or category management in the marketing production process.**

It couldn't be simpler. In planning the allocated space, category managers, for example, can easily drop articles, images, descriptions and logos onto a page template without using layout applications like InDesign. This is done manually or using data import in which the predefined page context automatically defines product selection and placement.

## Page grids

Using drag & drop, the articles are moved from the list of pre-selected master data either to grid cells already created or to any point on the template. Different templates can be defined in advance for certain product groups. This approach is recommended, particularly when producing retail inserts or circulars, and all grid cells can be scaled at any time, if allowed. Certain grids on a page can be reserved for certain products on mixed pages.

## Free layout

In planning the allocated space for layout-driven catalogs, placement is also possible with grids. Placeholders for images, prices, text and logos can be placed anywhere on the page and scaled. Text can be entered, e.g. content in „labels“ using a simple text editor.

## Intelligent planning tools

Data relevant for planning such as e.g. sales information, can be displayed as labels for individual products and thus provide objective information for the outstanding placement and design of certain products such as e.g. „heroes“.

## Easily fill variants

One advertisement - numerous variants. Whiteboard also supports space allocation for a large number of regional or market-specific variants. During this stage of production, the layout artist already sees whether individual variants have already been completely filled. This is an easy way for regional exchanges to be planned and checked without losing sight of the big picture.

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# LAGO WHITEBOARD

### **Bidirectional design**

Pre-layout is linked via a database in both directions with the detailed layout in InDesign - any change in the pre-layout is shown in the detailed layout. Vice versa, changes in the layout file impact the pre-layout so that e.g. the category manager, can monitor the progress of the final layout at any time. To document certain planning stages, Whiteboard can also be used to generate PDF files.

### **List of features**

- Graphic space allocation for articles, elements, images, descriptions, logos
- Available as a desktop and browser application
- Access to master data for space allocation of specific advertisements
- Access to elements and article data of the page context
- Select and use page layouts
- Select and use element layouts
- Adjust grid cells
- Fill grid cells
- Exchange products between grid cells
- Direct layout of components without using a layout application
- Display data relevant for planning as label on the page or product level: stickers
- Configuration of sticker data: Data of elements articles, prices
- Processing of several country or market variants
- Mark empty, partially filled, filled, overfilled grid cells
- Identify variant differences at the level of layout and content
- Display data reduction on the page level
- Link grid cells with categories (dept., product group)
- Display configurable information on the product group level and on the grid cell level
- Limit editing of certain grid cells at the product group level
- Display and edit corrections