



**Drupal Europe**  
Darmstadt, Germany  
10 - 14 September 2018

# OPENSOURCE MEETS ENTERPRISE

## HOW DRUPAL AND SAP HYBRIS CAN TEAM UP



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Darmstadt, Germany  
10 - 14 September 2018



## Digital Transformation + Enterprise

TRACK SUPPORTED BY

**Acquia**<sup>TM</sup>



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Married, 2 kids

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#Espresso #MTB #Italy

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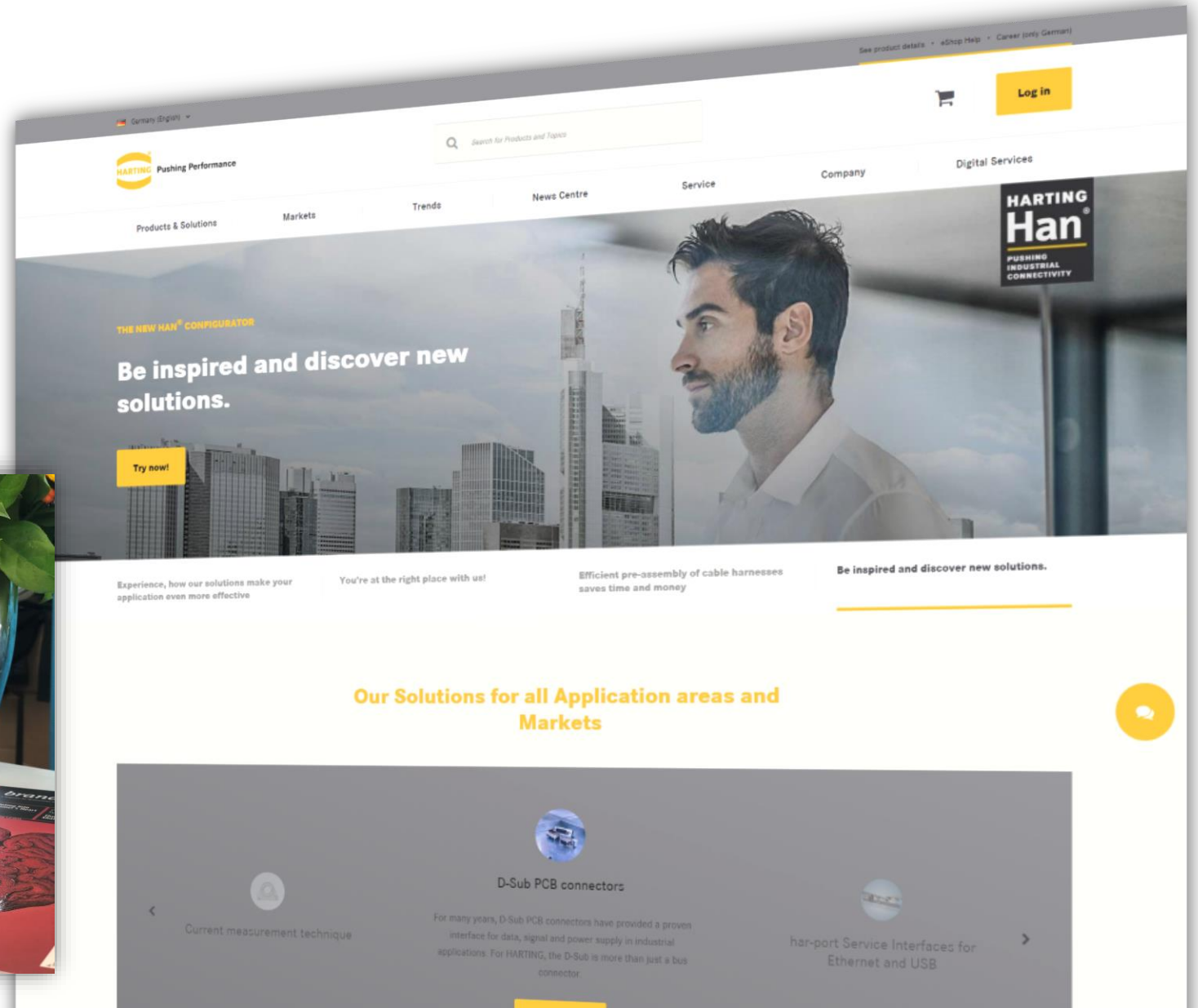
## WHAT'S IN FOR YOU?

How we used Drupal to build a powerful B2B marketing platform.  
Integrating SAP Hybris, Microsoft Dynamics and Acquia Lift.

# ABOUT THE CLIENT



- > HARTING Technology Group
- > Industrial connectors
- > 700+ Mio turnover
  
- > About 50 national subsidiaries
- > 24 languages
- > Decentralized marketing / editor teams





## OUR RESPONSIBILITY

**Concept & Design**

**Architecture**

**Implementation**

**Operations & Maintenance**

**Overall project lead**



**HOW IT BEGAN...**

# HOW IT BEGAN

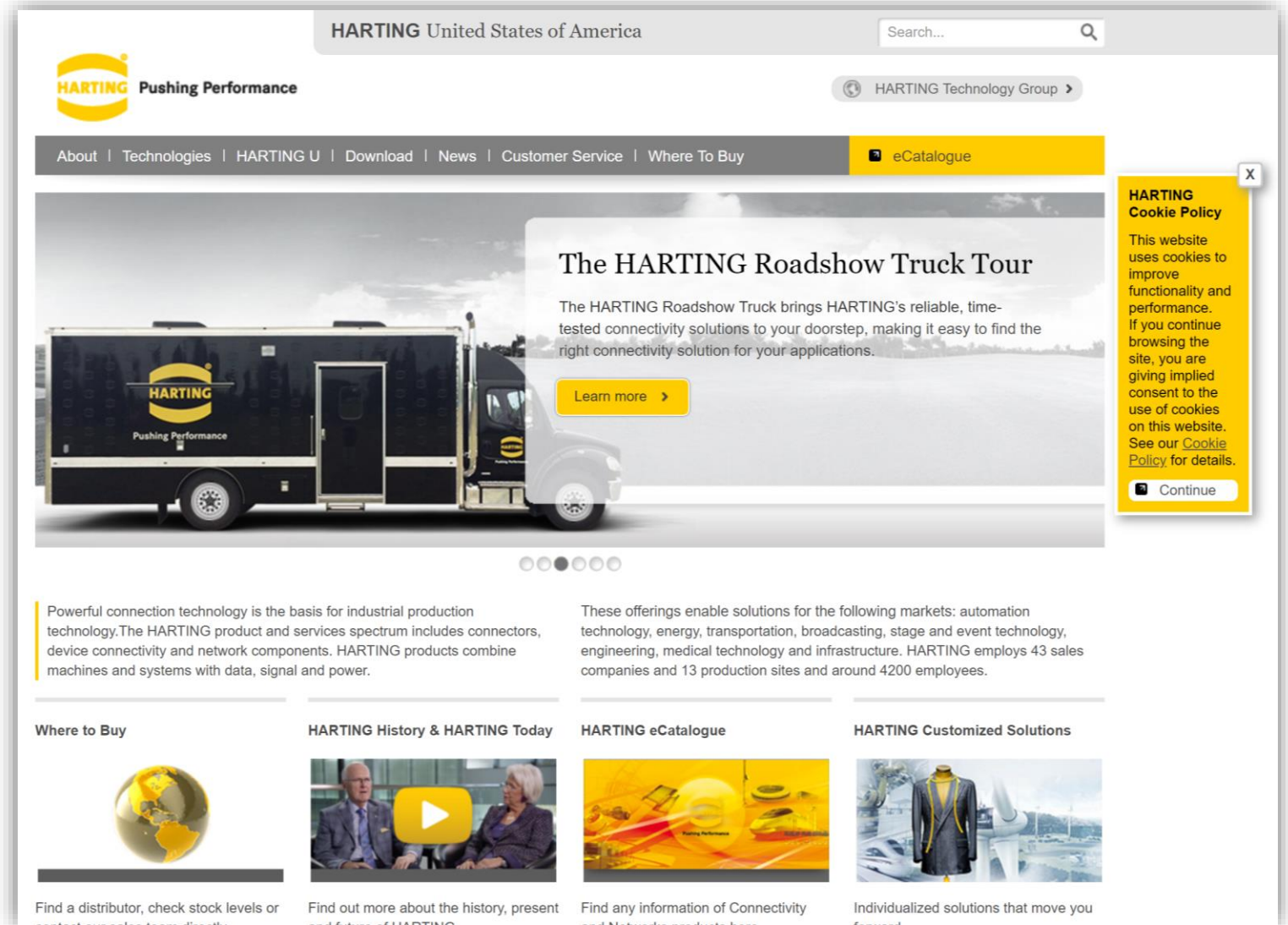


## > Requirements & Situation

- > Typo3
- > 1 year
- > Personalization
- > SSO with SAP Hybris
- > Microsoft Dynamics integration

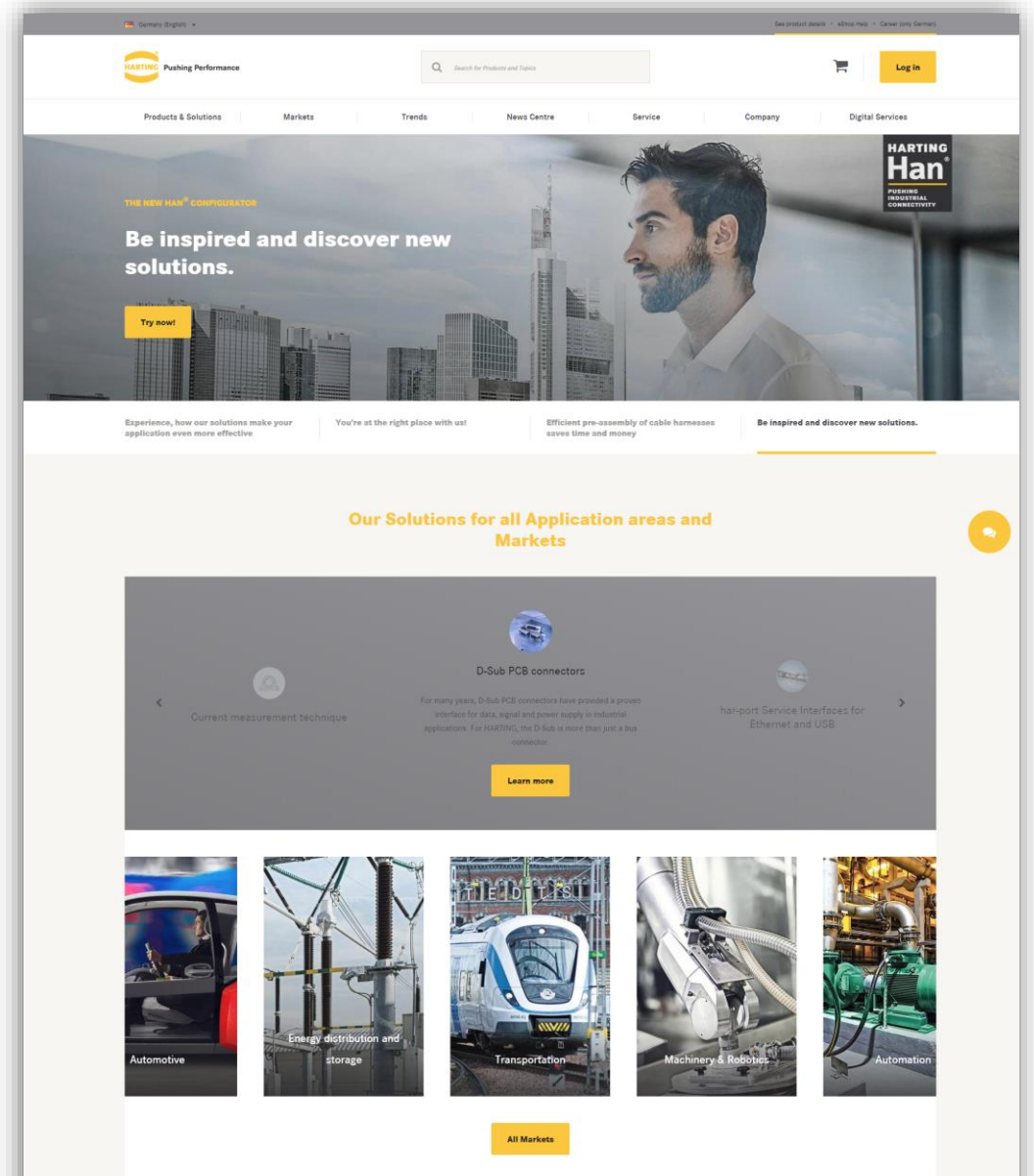
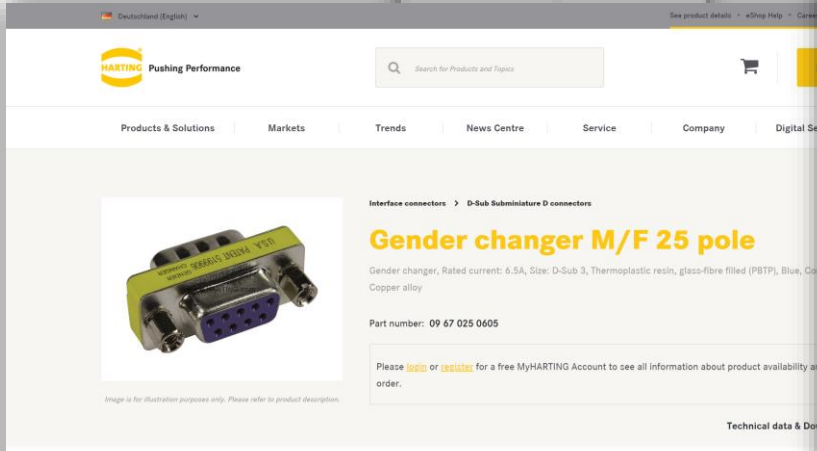
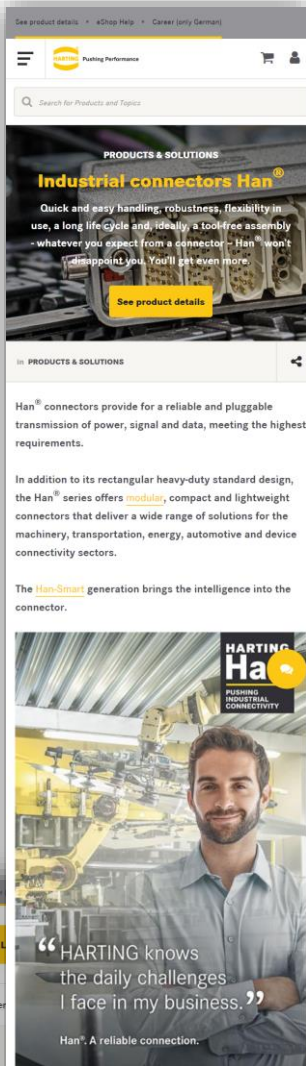
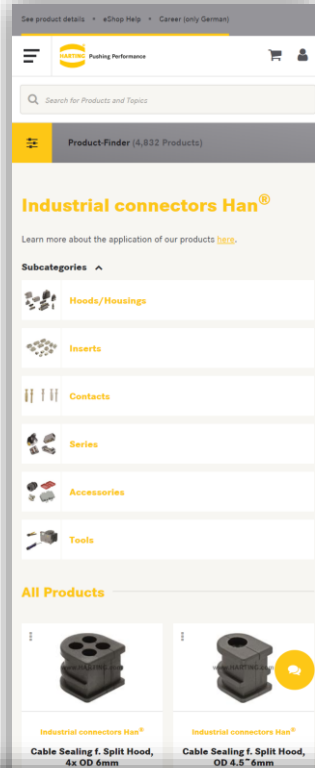
## > Goal:

Unified user interface for website and SAP Hybris shop, without friction in brand experience





# HOW IT BEGAN



Technical data

Downloads

LEARN MORE!

All Markets

### The pitch

- > 3 agencies
- > More than 20 people attending
- > 3 hours
- > 168 charts
- > ...some sleepless nights, fixing charts 30 minutes before the pitch

We were supported by:

- > SAP consultant
- > Acquia



**CHALLENGE** Convince the client to use Drupal

## Drupal is eating Typo3 and Sitecore for breakfast...

Selected CMS market share, Top 10k Websites worldwide  
Source: builtwith.com



■ Typo3 ■ Sitecore ■ Drupal

### Drupal

3500+ core committers to Drupal 8  
35000+ developers / module contributors  
100000+ active contributors

1.000.000+ registrierte Benutzerkonten

Internationale Entwickler-  
Zertifizierungsprogramme

Globale Community mit hunderten Events  
jährlich

### Typo3

200+ committers to Typo3 CMS7

79.000+ registrierte Benutzerkonten

Zertifizierung nur auf Deutsch

Community hauptsächlich in Deutschland,  
kaum verbreitet global

**And then we waited endless 6 weeks...**

...and they told us:

We make a PoC first, then we'll decide!



# POC-PHASE WHAT TO BE ANSWERED

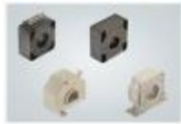
## Product data in Drupal?

- > Hybris is providing all product and category data via json/Solr
- > Imported as nodes and taxonomies

→ This was already a tremendous advantage for the editors, having access to product data within the CMS.


Category URI (all languages)

Category ID (all languages)

Category Image  








Alternative text \*

This text will be used by screen readers, search engines, or when the image cannot be loaded.

 STROMMESSTECHNIK\_HL.jpg (3.87 KB) Remove

Parent Category Id (all languages)

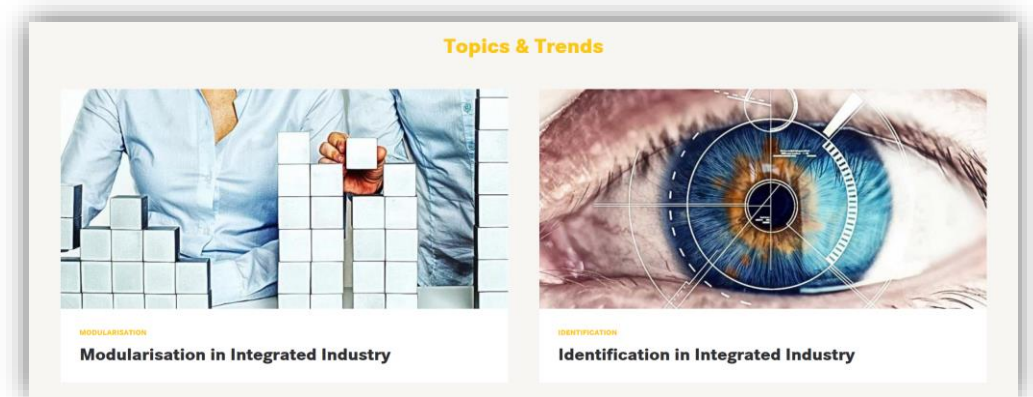
**Products from the HARTING range**

					
<b>har-flex®</b> har-flex strain relief 98pos 15 29 098 0503000	<b>Cable connector</b> D-Sub, MA AWG 22-26 crimp cont 09 67 000 5576	<b>har-flex®</b> har-flex IDC fem 70pos PL1 15 29 070 2501000	<b>Cable assemblies</b> ix Industrial, PVC cable assy, 0.2m 09 48 262 6749002	<b>har-flex®</b> har-flex IDC fem 78pos PL1 15 29 078 2501000	<b>Hoods/Housings</b> Han 16HP Direct/B-HTE-M20 19 39 616 0445

[See product details](#)

## Is personalization working with Hybris?

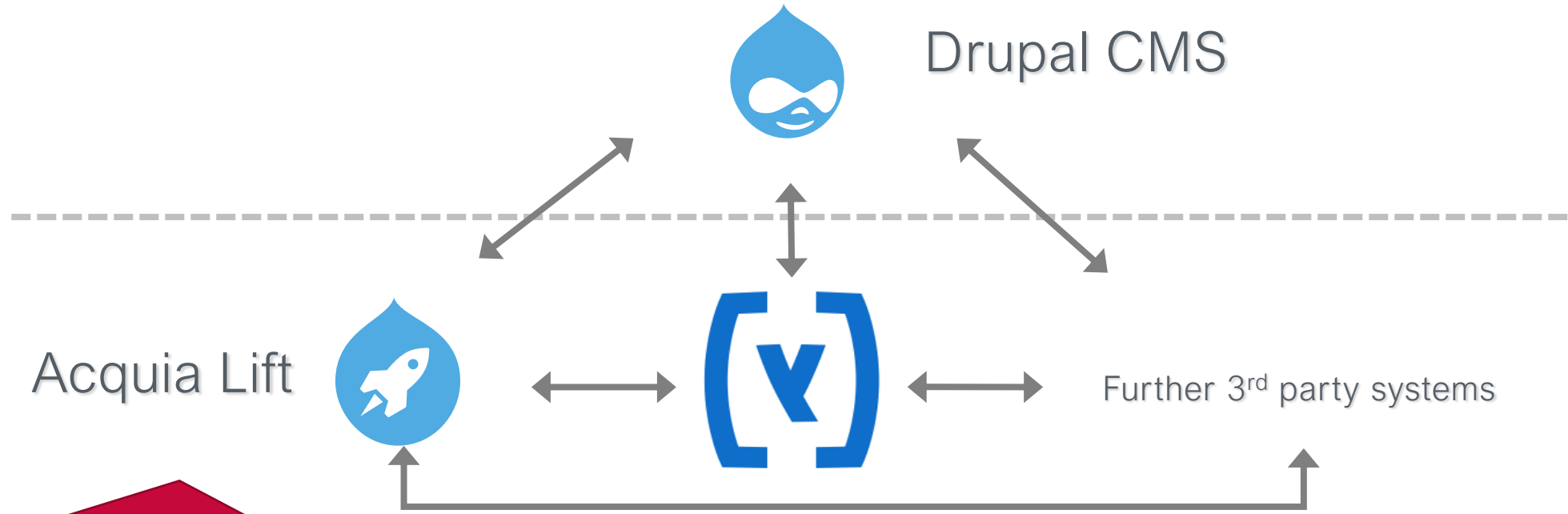
- > Basics
  - > Acquia Lift
  - > Contents in Drupal
  - > Modular Design
- > Integration
  - > installed Acquia Lift modules in Drupal
  - > C&P of Lift-JS-Snippet in Hybris
- > Challenges
  - > Hiding/showing of depending DOM elements
  - > http BasicAuth



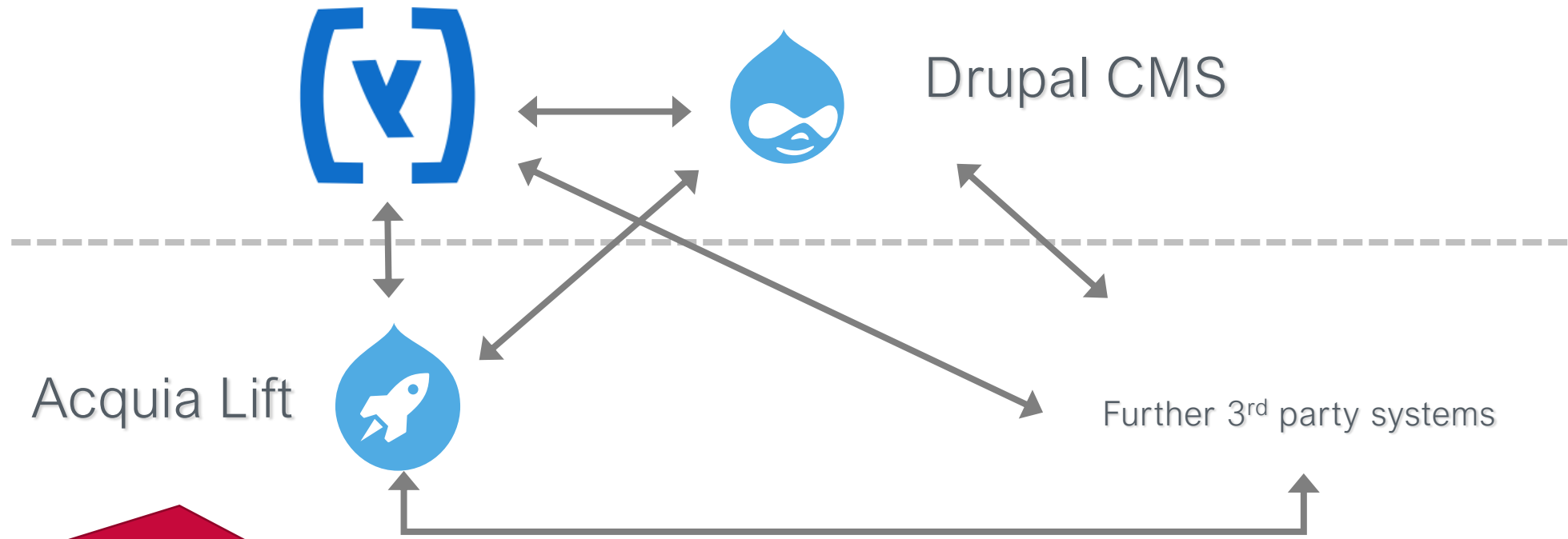


## Going Headless or not?

- > Most innovative approach
- > Best result for user experience
- > ...but also most expensive solution.



Pro: Best result  
Con: Bottleneck, risk, costs



Pro: Less risk, costs  
Con: additional concepts

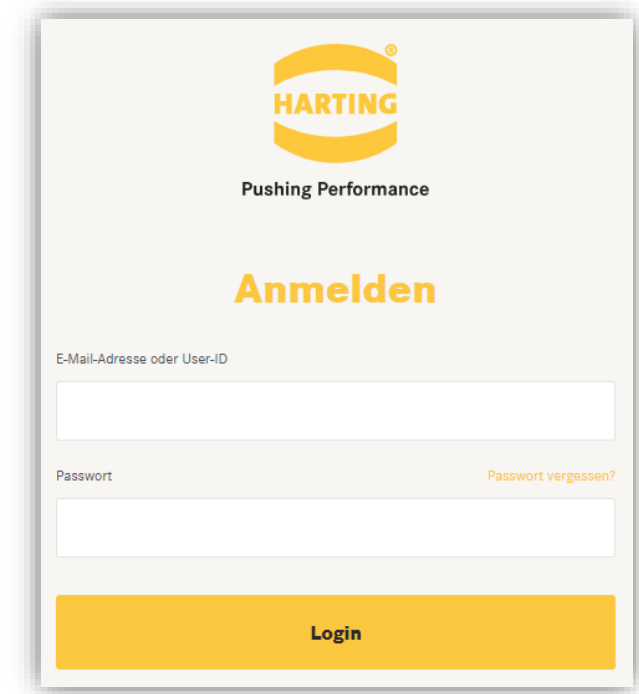


## Going Headless or not?

- > Our conclusion & decision
  - > Full headless approach is too expensive & too risky
  - > We'll use the frontends of Drupal and Hybris
  - > ...but we build the **most important features as decoupled widgets**

## SSO with Drupal & Hybris

- > Requirements:
  - > Login anywhere should result in being logged in everywhere
  - > Two types of users: SAP users, and a new additional one
  - > One centralized user database
- > First approach while PoC:
  - > Using the OAuth-API of Hybris
- > Result:
  - > Not possible with built-in-feature of Hybris
  - > Authentication is not the problem
  - > No user and session information as feedback
- > **Conclusion: we need a different approach**



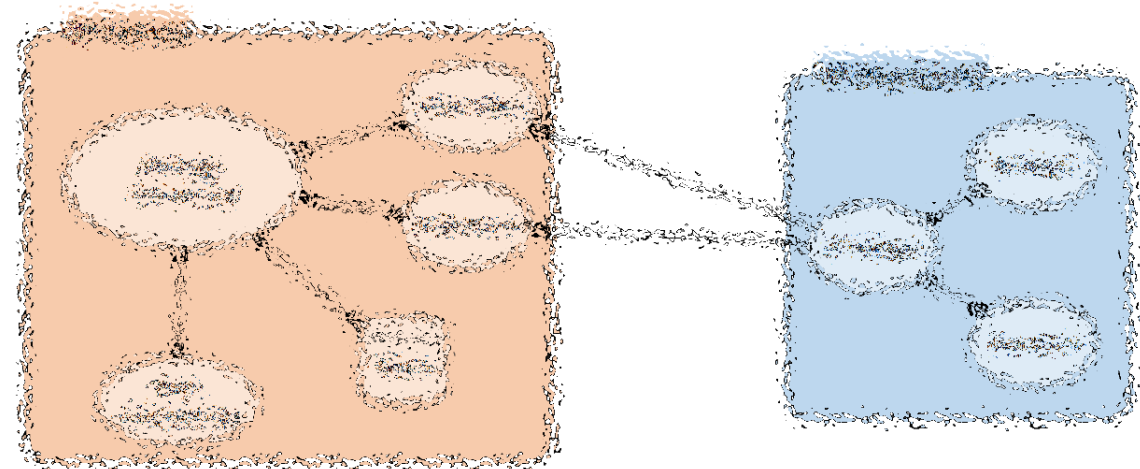
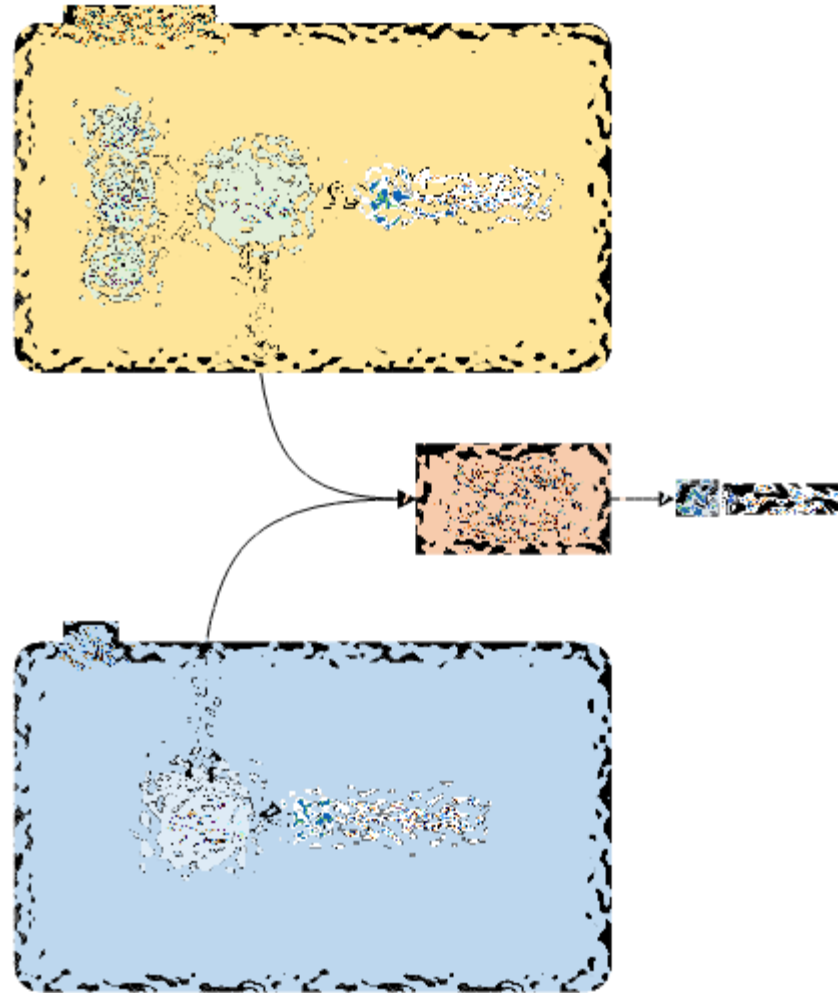
The screenshot shows the HARTING login interface. At the top, the HARTING logo is displayed with the tagline "Pushing Performance". Below the logo, the word "Anmelden" (Login) is written in a large, bold, orange font. Underneath, there are two input fields: the first is labeled "E-Mail-Adresse oder User-ID" and the second is labeled "Passwort". To the right of the password field, there is a link that says "Passwort vergessen?". At the bottom of the form, there is a large orange button labeled "Login".



POC SUCCESSFUL? **YES!**

## How did we solve the problems with Hybris OAuth?

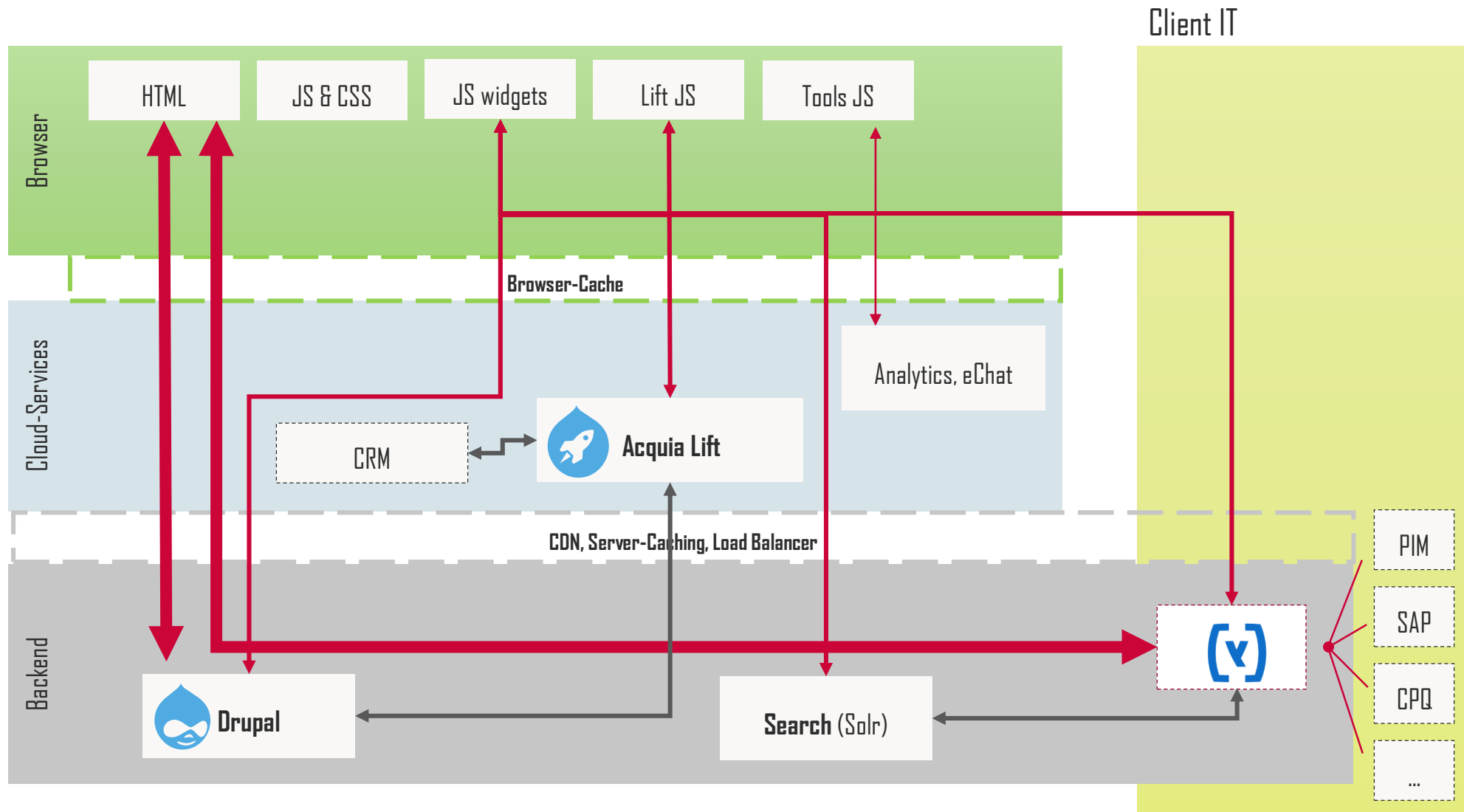
- > Individual implementation of an Identity Provider system
  - > central user database was Hybris
  - > Built to provide login- & session sharing for multiple systems
- > We use native Drupal & Hybris users
  - > So no other changes on permission management etc. were necessary
- > JS-Widget, decoupled, communication via websockets



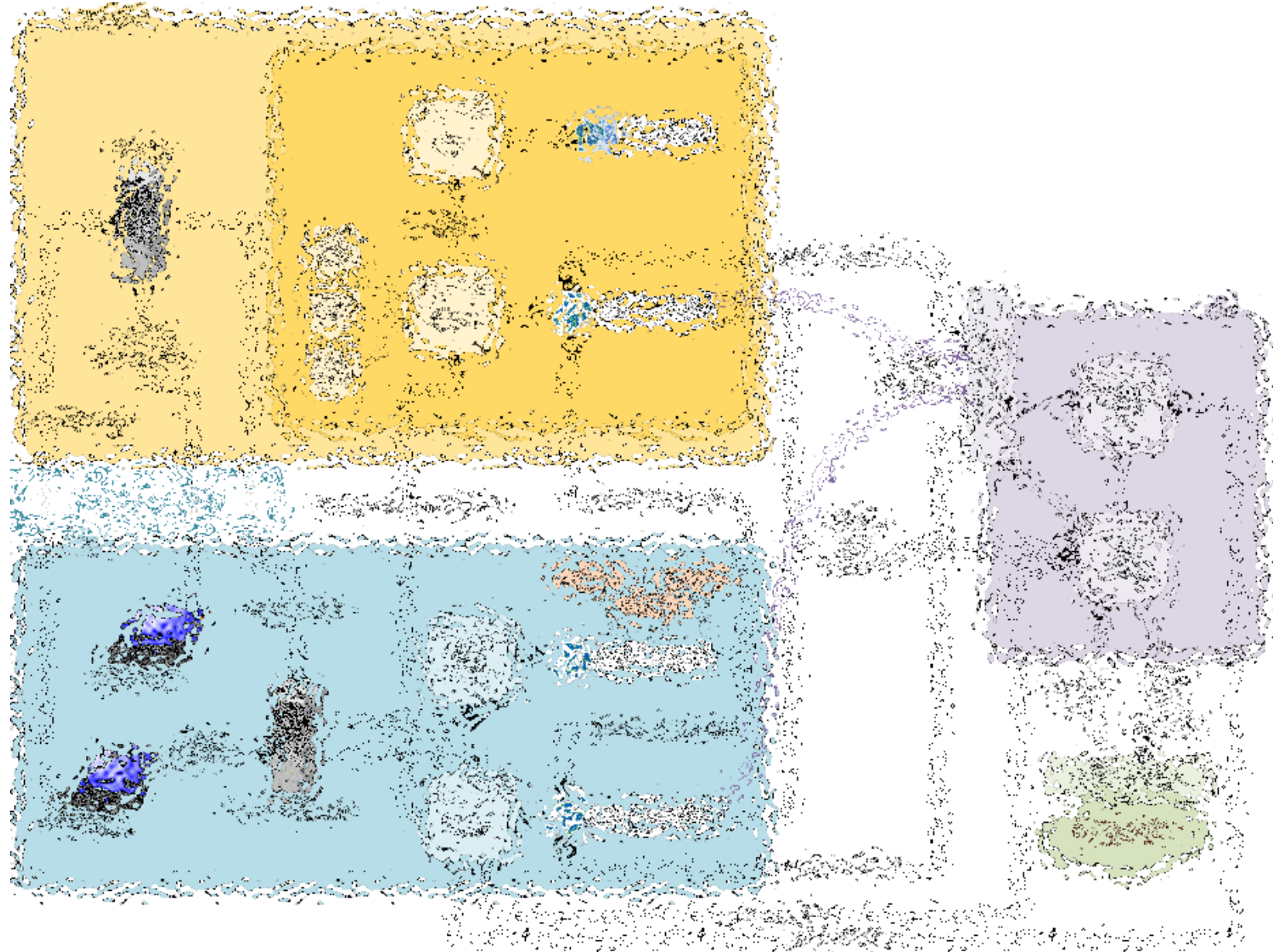


# ARCHITECTURE OVERVIEW



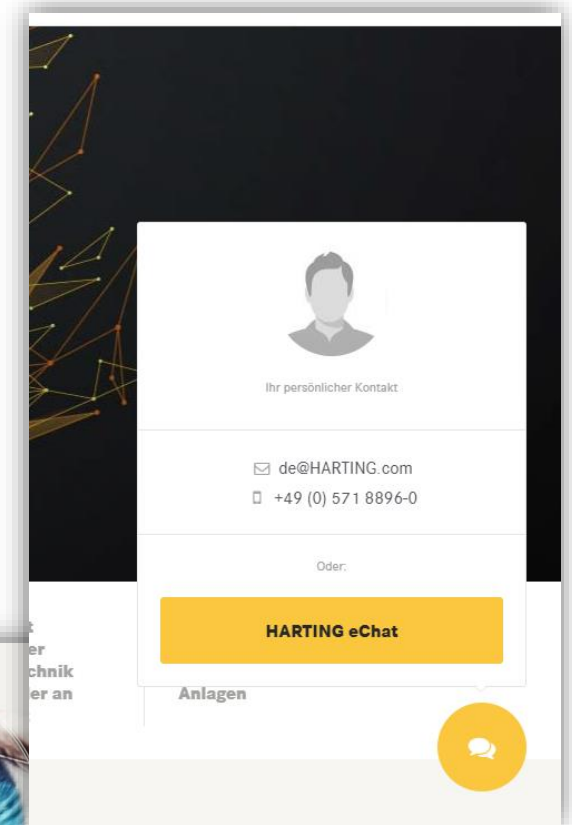
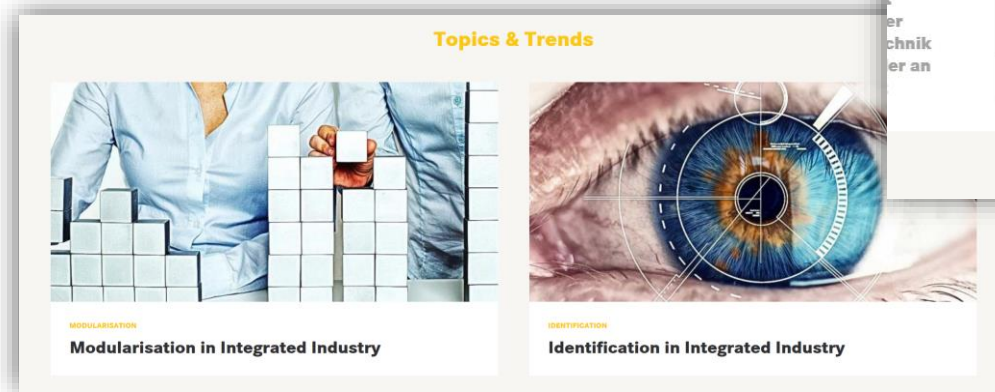


- > **Acquia Lift connects website, shop and CRM**
- > Simple JS-snippet for Hybris
  - > Tracking
  - > Experience builder
- > Drupal
  - > plugins for tracking & content hub
- > Custom middleware
  - > Imports/syncs the customer data from CRM
  - > Delivers relevant user behavior to CRM
  - > Retrieve user information from Acquia Lift



## Personalization

- > Taxonomy used for behavior tracking
- > Contents & teasers
  - > Depending on market sector & role, if known from CRM
  - > Based on user behavior for anonymous users
- > Personal contact persons
  - > ZIP / region for anonymous users
  - > Data from CRM



## WHERE ARE WE?

### Drupal and Hybris, already achieved:

- > SSO
- > Personalization

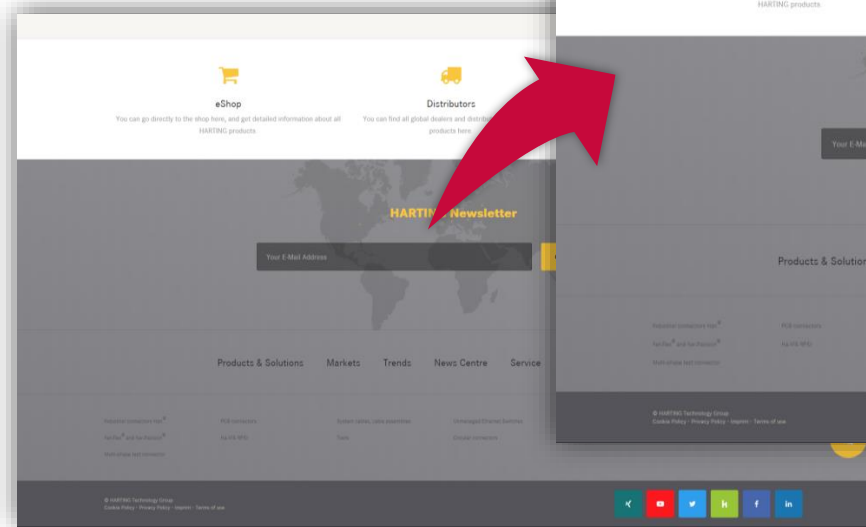
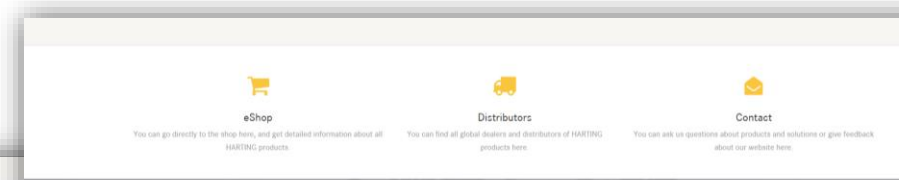
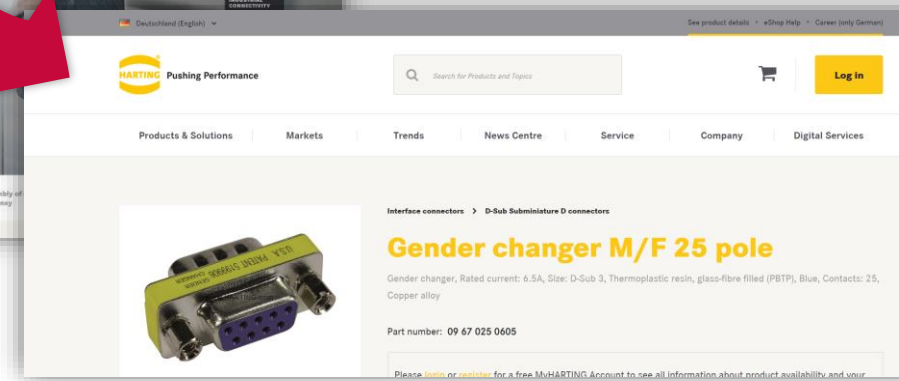
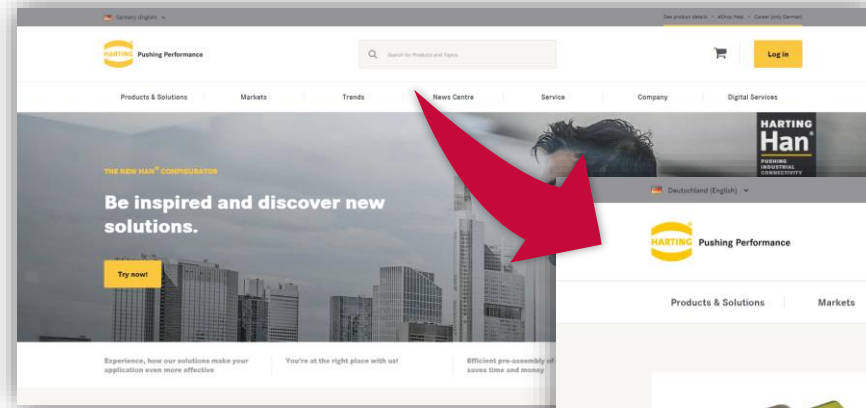
### Still to achieve for best UX:

- > Unified layout
- > Features

# UNIFIED LAYOUT



- > Key factor:
  - > Design made of one UX-team for both systems
  - > at the same time
  - > Modular layout, based on Atomic Design principles
- > Shared assets
- > Shared Header and Footer
  - > For each country, for each language
  - > Editors have control over navigation and contents
  - > Hybris retrieves regularly pre-rendered markup from D8-API
  - > Cached locally in Hybris





**Features, that need to be accessible from everywhere**

**...additional, they also need data from one or even both systems.**

## **JS-WIDGETS**

**So we used the decoupled-approach and implemented them as**

**JavaScript-widgets.**

<

Q

x

### Products

**(3) eShop News**

(3) HARTING MICA >

**(9) HARTING MICA**

(1) Basic >

(1) USB >

(1) MICA 2 >

### Topics

TOPICS

**Integration in Integrated Industry**

TOPICS

**Digitalisation in Integrated Industry**

CATEGORY\_ARTICLE

**Already on the way to the customer  
the day the order is received**

## Site search

- > JS-widget is just UI
  - > only passing through search phrase
  
- > Requesting search APIs of Drupal and Hybris/Solr at the same time
  
- > Last step: rendering of results, separated & categorized

Still missing & next steps:

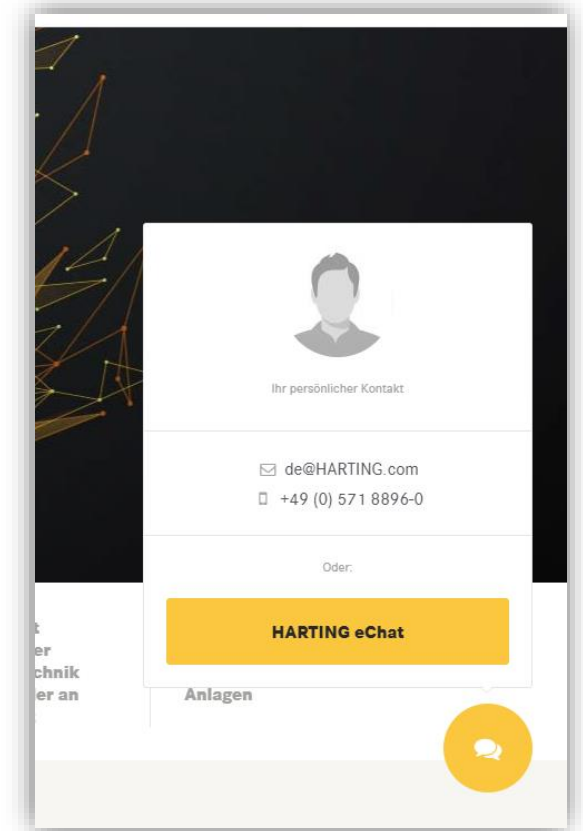
- > Autocomplete
- > Improve quality of Drupal results

## Contact widget

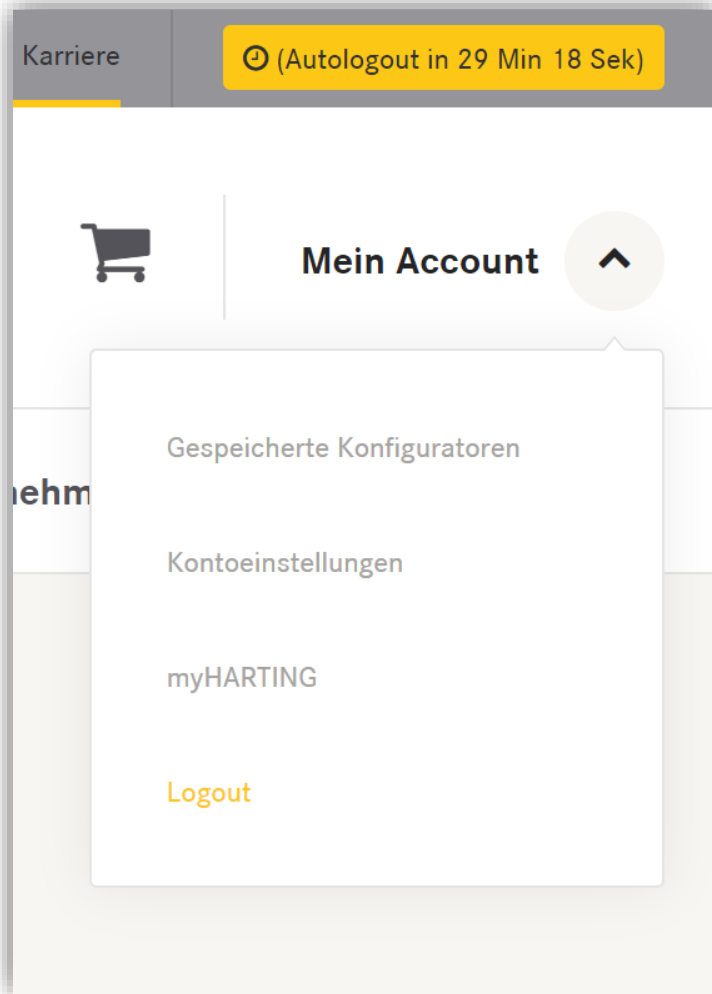
- > Direct access to eChat, general contact information and personal contact
- > Depending on CRM-data and/or ZIP

### Mechanism:

- > JS requests Acquia Lift user data
- > proxying through Drupal
- > Once contact is determined, the particular contact information is retrieved from Drupal content
- > Result is cached in browser cookie



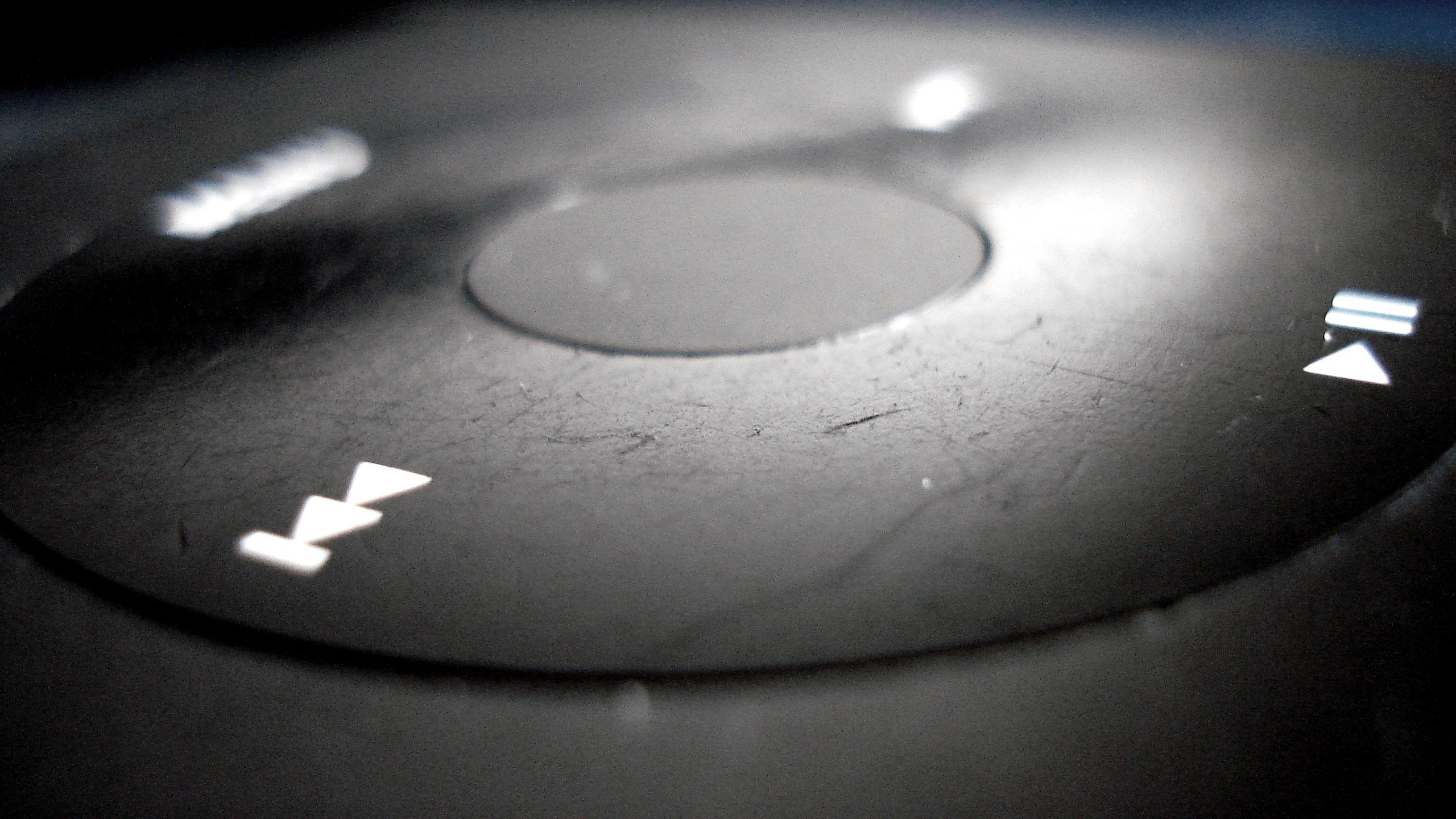




## User menu

- > Logout timer & login status information
  - > Important to customers, due to SAP-internal processes
- > User menu
  - > Depending on account type and permissions
  - > Depending on data from Hybris

- > Widget-concept is essential for whole platform
  - > Sharing of code
  - > Easy maintenance
  - > Stability
  - > independency
- > Smart deployment was crucial
  - > Needs to be independent from Drupal or Hybris deployment
  - > ...but at the same time there were dependencies
- > Currently in development:
  - > Wishlist, collecting different fragments, like pages/stories, products, categories, configurations etc.





LAUNCH APPROACHING

- > Challenges
  - > GoLive with 3 depending systems at the same time
  - > Coordination of 5 teams required – client-IT, client-marketing, Hybris-integrator, trio-group teams
  - > Data migrations in Hybris
- > Preparations
  - > Exact time schedule & responsibilities
  - > Checklists
  - > QA-scripts, primarily for checking that each API is talking to the correct ENV
- > Organizational
  - > Communication via HipChat
  - > Teams were in their offices
  - > Telephone conferences at certain milestones
- > Start: Sat, Dec 9, 2017, 8:00
- > **Got problems? Yes!**
  - > Data migration took longer than estimated
  - > Hotfixes in Drupal & widgets
  - > Problems with communication between IDP & Hybris
  - > Hybris deployment duration



**CHEERS!**



# DRUPAL INSIGHTS

- > Started with 8.3, now on 8.4; 8.5 on DEV
  
- > Used modules
  - > AdvAgg
  - > Workbench moderation
  - > Config Split
  - > Paragraphs
  - > Domain Access
  - > GeoLocation
  - > Redis
  - > Media Entity
  - > Search API
  - > TMGMT with custom extension
  
- > Deployment
  - > Git
  - > TeamCity
  - > Dev – Stag – Prod
  
- > Hosting
  - > HA cluster
  - > 3 VMs
  - > DB-Backend and FE separated





## RECAP

**9 Months from first byte to launch**

**Lucky client**

**Proud team**



## IN THE UPCOMING MONTHS

**Better integration of different user account types and registration process**

**Rollout of the remaining national subsidiaries**

**UI/UX improvements**

**DAM integration**

**Integration of Marketing Automation**

- > Project team
    - > 2 internal teams
    - > 1 external team
    - > The client / marketing & IT
    - > No one, also not the internal ones, had ever worked together
  
  - > Project management
    - > Two JIRA environments
    - > Nearly no agile experiences on client side, Scrum coaching
    - > The power of retrospectives!
  
  - > Digital change was challenging for the client employees
  
  - > Underestimation of customer feedback after launch
- > Translation management
  - > Localization of contents

# Become a Drupal contributor Friday from 9am

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- First timers workshop
- Mentored contribution
- General contribution



QUESTIONS?

...or later at the trio-group booth!  
(floor 1.2, opposite of the stairs)

## PHOTO CREDITS



- > Headless: <https://flic.kr/p/bvHM2v>
- > Cheers: <https://flic.kr/p/ekWsNe>
- > Remote control: <https://flic.kr/p/8zx5nj>