

# Everything You Need to Know to Start Your Drupal 9 Migration Journey

A step-by-step guide for a successful Drupal 9 Upgrade



Authored by

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# Introduction

To deliver exceptional customer experiences, your marketing and IT team needs flexible technologies to collaboratively launch and evolve experiences that drives successful outcomes. This eBook dives deep into how you can benefit from Drupal 9, the importance of aligning your marketing and IT teams, and what it takes to plan and execute a successful Drupal 9 migration.

## Why Switch to Drupal 9?

Released in June 2020, Drupal 9 is the most flexible, easy-to-use, and secured Drupal version to date. It offers:

### ■ Enhanced Content Authoring Experience

Drag and drop elements in the layout builder eliminate dependency on developers and allows content authors to self-serve their needs.

### ■ Faster Time to Market

The self-reliant authoring experience creates quicker time to market for your digital assets, improves engagement, and increases conversions.

### ■ Headless Architecture

Drupal 9 offers REST API by default in the core to help brands deliver content in multiple channels and devices.

### ■ Improved MarTech Performance

REST API gives the ability to connect or integrate with any third party MarTech tools and it helps streamline the process and improve your MarTech stack's performance.

### ■ Implement Personalization Strategies

Through personalization modules, Acquia Personalization, or any other third-party personalization engines, you can get deep insights into your customer buying patterns, syndicate content, and deliver relevant and contextual experiences.

### ■ Better Security

Higher versions of PHP, the right PHP plugins/modules, and OOPS programming methodology helps to enhance code quality and reduces vulnerabilities. With the removal of deprecated codes, your site is more secured.

### ■ Improved Performance

Drupal 9 delivers enhanced performance through an improved caching mechanism available by default in the core.

### ■ Easy Custom Feature Development

For example, if you are developing a weather report widget from a 3rd party application, in Drupal 7 you need to write a new module, whereas in Drupal 9 it becomes simple by using the existing module and creating a block plugin to integrate the widget.

### ■ Better Backend Management

A clean/improved UI and admin navigation system help to better manage the content, taxonomy, users, blocks, themes.

### ■ Optimized Code Structure

In Drupal 7, the necessary/required files need to be included using “require statement” that will load all the files on each page consuming more resources and impact on site performance. Whereas in Drupal 9, the autoload feature is available default at the core that allows the modules/blocks loaded only when required.

### ■ Simplified Process for Managing Updates

The update and upgrade processes are simplified using Composer. Composer allows you to easily install minor updates or manage contributed modules and themes.

### ■ More Accessible

To make the site accessible for different groups of users, Drupal 9 provides optimized built-in HTML structure support for 100 languages, voice and visual search, and more.

### ■ Migrate API

Drupal 9 provides easy migration capabilities from other CMS's to Drupal using migrate API tools.

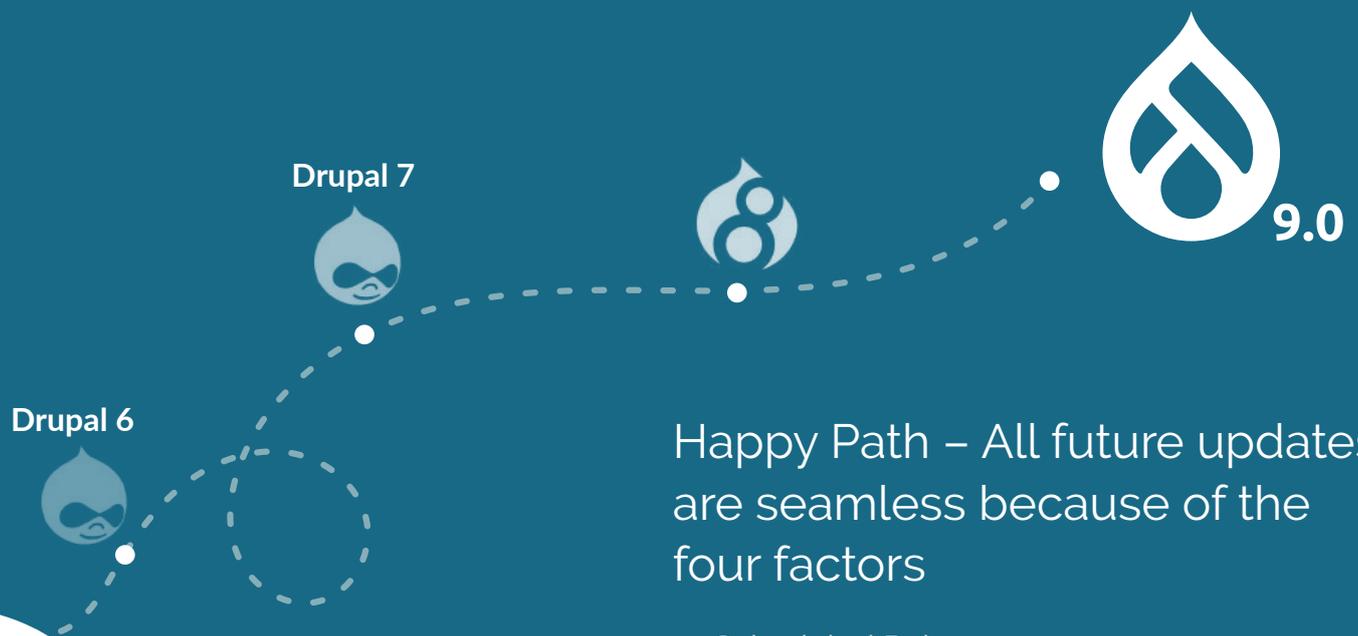
## Create Winning Experiences

Drupal 9 is simple for content editors, robust for administrators, secure and accessible for users

“

“Drupal 9.0 represents 4 ½ years of improvement and developed by more than 4,500 individual contributors ever done to any open source CMS.”

**Dries Buytaert**, Founder and Project Lead, Drupal



Happy Path – All future updates are seamless because of the four factors

- Scheduled Releases
- Semantic Versioning (8.8.1)
- Experimental Projects / Features
- Process of Deprecation

Once you upgrade to Drupal 9, all future major updates will be significantly easier, and it keeps you on the continuous innovation cycle with feature additions twice a year.

# Why Upgrade Now?

In these unprecedented times, every brand must understand how to strengthen their digital footprint, drive more sales, and deliver relevant customer experiences.

Upgrading your site to the latest version of your CMS helps you take advantage of new features, modules, compatibility, security, and performance. You will be armed with the latest and greatest technology to deliver amazing customer experiences that could drastically improve your bottom-line.

**Are you hesitating to upgrade?**

**Have you had a bad experience with upgrades?**

**Do find upgrades expensive and time-consuming?**

**Are you worried that an upgrade will negatively impact your customer data, SEO, content, site security?**

Allow us to help you put your mind at ease.

**The secret to a successful upgrade is having the right team behind you who can build a comprehensive upgrade plan and ensure the process is agile, lossless, and cost-effective.**

## Upgrade vs. Re-build

The goal with Drupal 9 is to have a powerful modern site designed to engage and activate your customers.

To achieve this, should you upgrade or re-build? It depends on how your Drupal site is configured and how well you have kept up with the latest updates.

If you are already in Drupal 8 and your website has a simple architecture, upgrading to Drupal 9 is pretty simple.

### How timely upgrade helps?

- Strengthen your digital core to meet growing business needs
- Deliver relevant experiences and gain competitive edge
- Improve ROI of your Drupal solutions

If your Drupal 8 site has a complex architecture, you need to start by refactoring the code. Refactoring means restructuring code without changing its external behaviour and functionality. Then, you can upgrade to Drupal 9.

If you are in Drupal 7 or Drupal 6, you need to rebuild your site because Drupal 9 significantly changed the way content and configuration are stored in the database.

### **Upgrade vs. Rebuild – What's the best approach?**

Put your customers first.  
Understand their journey and build the experience that keeps them engaged.

## Drupal 9 Upgrade Project Path – Best Practices

### **Roadmap Development**

Before developing an upgrade roadmap, identify the needs of the key product owners, help create a collaborative environment, and come together to develop the right strategy for the upgrade process.

### **Key Questions for Your Marketing and Business Teams**

- What are their pain points?
- Are they able to build landing pages fast and launch campaigns quickly?
- Does the platform help them deliver content across channels?
- Are they getting the right data on their customers and be able to implement personalization strategies?

### **Key Questions for Your IT Team**

- Is the platform flexible?
- Are they able to reduce maintenance costs?
- Is there any performance or security-related issues?
- Is the hosting server scalable enough to handle sudden traffic surges or is there any website downtime?

### **Upgrades Can Help in Digital Transformation, Too**

Executives say the top benefits of digital transformation are improved operational efficiency (40%), faster time to market (36%), and the ability to meet customer expectations (35%).

Source : PTC and CorporateLeaders Survey 2018

# Assign Product Owners from Your Marketing and IT Teams

In order for the upgrade project to succeed, your marketing and IT teams must be aligned.

We recommend assigning a project owner from each team throughout the project.

# Product Owners are Responsible For

- Meeting the end goals of Marketing and IT teams
- Defining KPIs
- Unifying the team
- Building relationships
- Knowledge support
- Handling all project communication
- Ensuring the project gets completed on time

# Platform Readiness Assessment Checklist - Identifying Key Improvement Areas

## Strategy

Is your digital strategy aligned with your overall business strategy?

## Digital Core

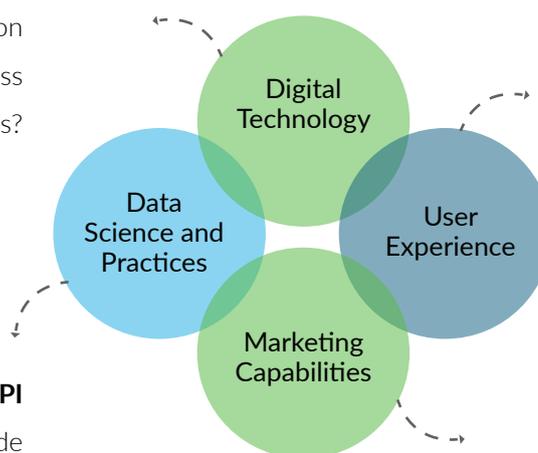
Does your platform and application allow you to meet evolving business needs?

## KPI

Are you able to gather organization-wide KPIs to improve customer experience?

## Data Collection

Are you getting a single view of your customer to implement deep personalization strategies?



## Navigation and Information Architecture

Are you fulfilling customer expectations, or disappointing them?  
Is your content easy to find?

## Front-end Design

Does your website deliver high mobile responsiveness?

## Marketing Channels Optimization

Which channels are working for you?  
Do you appear high up on search engine ranking page results?

## Landing Page Optimization

Are you delivering frictionless experience and making users act on the CTAs?

# Your Ideal Path to Drupal 9

## From Drupal 8 to Drupal 9 (For Simpler Sites)

Upgrade is similar to your regular updates

- Review deprecation code usage
- Perform minor updates to the modules
- Test the codes in Drupal 8 production environment
- Update the core to Drupal 9

## From Drupal 8 to Drupal 9 (For Complex Sites)

- Begin with compatibility check
- Upgrade status module (Key module)
- Install and enable upgrade status module
- Scan the contributed and custom modules (Look for deprecated/incompatible codes)
- Update the modules
- Check the status to confirm
- If the custom module is not compatible, make the corrections to remove the deprecated codes
- Test in Drupal 8 production environment
- Then, update the core to Drupal 9 (with one of the recommended methods using composer)

## From Drupal 7 or Prior to Drupal 9

Involves typical migration process for all types of sites

- Need to consider if a complete change in architecture required
- Check for compatible contributed modules
- Re-write custom modules
- Check update complexity. (Need to ensure if functionalities are working right)
- Content migration
- Theme rebuilding

## How to Plan the Right Upgrade Process

Conduct an in-depth assessment of your platform and current processes, understand the digital maturity level, areas of improvement, and plan the upgrade process accordingly.

# Ameex's Advantage and Strategy

## Our Upgrade Methodology

### Drupal Upgrade Process – How We Do It!

#### Content Inventory

- List all content types
- Identify duplicate contents
- Upgrade planning and documentation

#### Content Cleaning / Revision

- Migrate file (video, pdf, etc), if any that resides within the content
- Replace absolute URL with the relative URL
- Clean / Update content if there is any issue with the format

#### Test and Validate

- Ensure all content is migrated in the expected format
- Validate SEO data of the page
- Check if there is any 404 pages exist

#### Analyse Existing CMS

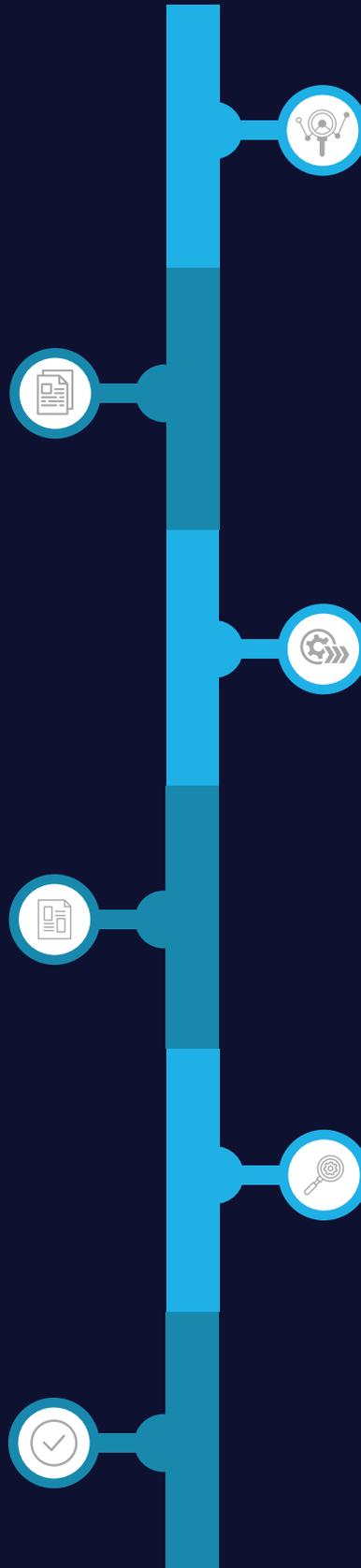
- Understand how the content, files, users etc. are stored
- Analyse features and existing architecture
- Report and documentation

#### Upgrade Process

- Use any software or write custom scripts for upgrade
- Maintain log file for upgrade
- Migrate URL structure of the page if needed

#### SEO

- Add redirects if the URL of the page is changed
- Migrate meta-tag, page title
- Update inline 404 links with the new one



# Time and Cost Savings with Our Digital Accelerators

We have 13 years of experience in reviewing, auditing, fixing, and re-engineering Drupal systems. Ameex has developed our own digital accelerators that will make your upgrade process fast and easy for websites regardless of their complexity.

## Some Benefits of our Digital Accelerators:

- Up to 50% reduction in time and cost for both development and maintenance
- Seamless and intuitive content authoring experience
- Ability to quickly create a landing page or localize a page or site
- Efficient and reusable code base using the right Drupal modules and APIs to improve efficiency and security
- Ability to quickly integrate with SIS, MarTech, Data, and other business systems
- Robust content and dynamic query architecture to accelerate your site-building needs
- Powerful taxonomy structure to support your site's organic SEO needs.
- Advanced security features including OWASP Top 10
- Multi-site management capabilities. AMP, PWA features



## Our Outcome Driven Engagement Model

We have delivered successes to our clients with an Outcome-Based Model/Approach.

We commit to meeting performance benchmarks including page load time, stability, security, scalability, and more post-Drupal 9 upgrade.

### Assured Performance Benchmarks

- Total development time
- Maintenance cost
- Quick time to market
- Localization of site
- Total cost of ownership
- Page load time
- Google page speed
- Stability testing
- Security testing
- SEO metrics
- Conversion
- Analytics maturity
- Data management and Cloud implementation



# Integrating Content and Commerce for Koenig Equipment on Drupal 9

## Project Overview

Koenig Equipment is a 100-year-old lawn, garden, and agriculture equipment solutions provider operating in 15 locations across Indiana and Ohio. They are one of the early adopters of digital business landscape delivering content-driven commerce experience for their customers. Ameex was approached to enhance their site experience further with better backend and frontend usability, deliver top-notch performance, and improve search engine ranking page results.

## Ameex and Koenig Equipment – Strong and Successful Relationship

Ameex maintenance and support team has been supporting their website needs with site updates and periodic health checks for several months. Our team were also addressing internal stakeholders' needs such as content updates, security updates, bug fixes, integrations, and many more. Our team set a collaborative environment for their team and built a solid and rewarding relationship.

## Opportunity Areas

Koenig Equipment's website is complex and content-heavy with several features and functionalities. Our team of Drupal Consultants, Digital Strategists, and Drupal Solutions Architects conducted an extensive discovery process and identified areas improvement areas.

- Simplifying e-commerce payment experience
- Enhancing search functionality, events, product, blogs, and news listing pages
- Enabling easy content creation for different users
- Better backend management
- Optimizing website for local searches and improving organic traffic

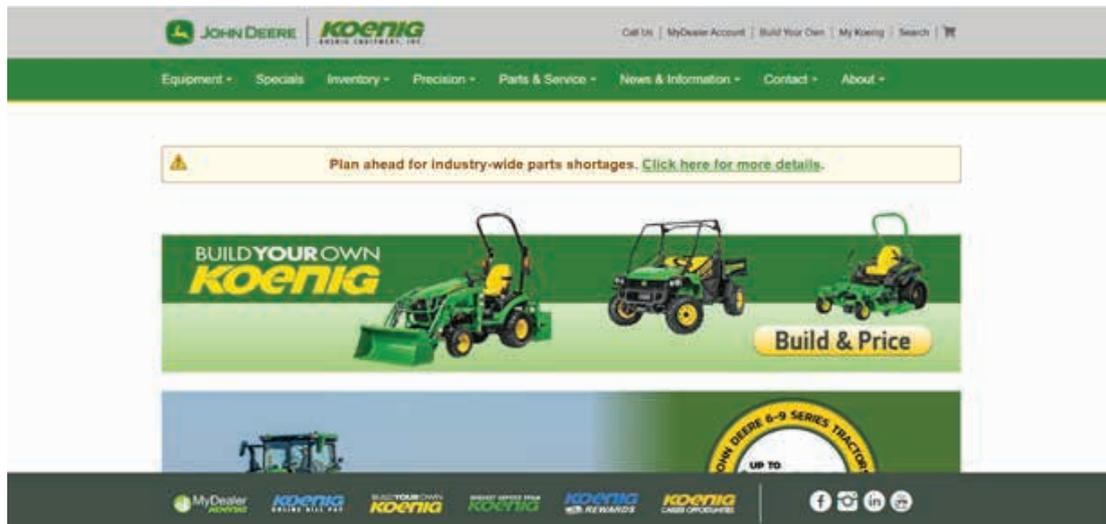
# Solutions Offered

## Seamless Migration of Complex Drupal 7 Site to Drupal 9

To enhance the overall site experience, our team proposed to migrate their site from Drupal 7 to Drupal 9. A site of such complexity requires a complete rebuild and our Drupal experts recommended it to build on top of Pantheon WebOps Platform. Drupal 9 and Pantheon is a unique combination in the market and despite many felt it is not possible to launch a site with too many functionalities and Cron jobs, our team migrated with ease and won appreciation from our partner team at Pantheon.

### Drupal 7 to Drupal 9 Migration – in 5 phases:

- **Phase 01** – Core migration, theme development
- **Phase 02** – Commerce migration
- **Phase 03** – Site development, Contributed module migration
- **Phase 04** – Custom module migration, Intranet portal development, Open solr integration, Events/Calendar revamp
- **Phase 05** – Enhanced commerce workflow (cart, checkout, review, payment), payment integration, blogs and news page, cookie consent, social share in product detail page



## Implementing Cron Job Functionality to Render Content

To display up-to-date information on John Deere products, our team implemented Cron job functionality to render content directly from John Deere site thus eliminating the need for manual content authoring and publishing. Although the Cron job function brought several challenges, our team incrementally resolved them and delivered seamless content display. Cron Job function is also extended to display News, Industry News, Futures, and Weather Report.

## Rebuilt Custom Modules on Drupal 9

Our team rebuilt nearly 40 custom modules that were existing on their Drupal 7 site on Drupal 9. Some of the custom modules includes Koenig Search, Koenig Specials, Koenig Online Billpay, Koenig Locations, Koenig Intranet, and more.

## Easy Online Shopping Experience

To make the purchase/reordering experience easier, our team implemented Bill Pay feature in which the customer can organize all their recurring bills in one place and pay them by just entering the amount and account number. Bill pay feature is integrated with Authorize.net for safe and secured transactions.

## Enhanced Web Experience

To give customers better access to information, we implemented Open Solr Search that provides accurate information on the site with advanced filters. Our UX experts further enhanced display of events in the calendar, blog and news/listing pages and made the experience much more relevant and engaging for end users.

## Better User Roles and Permission Management

Our team developed 15 user roles for Koenig employees to access different areas of the site to add or edit content. A customized admin dashboard was developed for exclusive access by the Super Administrator for managing user roles and permissions better and built a dashboard for Store admin to access information on store orders and customers.

## Improving Search Engine Results

Parallely our search engine optimization experts conducted an extensive SEO audit and provided a roadmap to improve their search engine ranking page results. From content to architecture, HTML, backlinking and internal linking, our team optimized each area that impacts SEO and helped them witness 50% increase in local organic traffic. We carefully planned Drupal 7 to Drupal 9 migration process to ensure the search rankings didn't get impacted post-launch -- in fact, we are seeing improved rankings after migrating to Drupal 9.

## New Features Enabled



Intranet Menu  
Access



User Dashboard  
Permission



Content Creation  
Permission for  
specific users



Custom Functionality  
(Drupal admin menu, John  
Deer update, Equipment  
feed monitoring, Intranet  
Product Display)

## Rebuilt Custom Modules on Drupal 9

- ✓ Slider Menu
- ✓ Product Listing
- ✓ Sticky Footer
- ✓ Printer Friendly
- ✓ Google Map Integration
- ✓ Newsletter signup and forms
- ✓ Search with Filter
- ✓ Career – Iframe integration (paycor)
- ✓ E-commerce
- ✓ Event calendar

## Value Delivered with Drupal 9 Migration

### Quick Migration

New site was launched following the Agile process

### 200%

Increase in new users

### 146%

Increase in sessions

### 3sec

Avg. page load time reduced from 5.8 second

### 1sec

Server response reduced to 2.1 second

### 300%

Increase in desktop users

### 200%

Increase in mobile users

### 40%

YoY increase in conversions through location pages

## “

“At Koenig Equipment we have been on Drupal for many years and have a complex site with several customizations. It was important for us to find a Drupal partner that would allow us to maintain the functionality of our existing site and upgrade us to take advantage of the functionality and security improvements available in Drupal 9. Ameex delivered. Their team took on the task and remained on schedule even when unexpected challenges were uncovered. The communication with the team was great and included regular updates on the progress of the project. I would recommend Ameex to handle anyone’s Drupal project.”

**Aric Koenig, IT Director, Koenig Equipment**

## Schedule a Meeting with Our Expert Team and Get your Free Drupal 9 Pre-Upgrade Assessment and Quote

Write to us: [sales@ameexusa.com](mailto:sales@ameexusa.com)

### Our Experts on Why Clients Choose us for their Upgrade Projects



**Ken Lowenberg**

Director, Digital Marketing and Technology

**“An Upgrade goes beyond just Technical**  
– We work with you to enhance -- and sometimes redefine -- digital strategy, fix experience gaps, and build the right digital stack for you to deliver powerful, unified, contextual customer experiences.”



**Aaditya Rajkumar**

Digital Solutions Architect

**“Innovative Mindset** - Our accelerators and migration processes help clients expedite their migrations at lower cost.”



**Delona Lang**

Director, Partnership and Customer Success

**“Customer-Centric** - We put our clients and their customers first when we build your perfect Drupal-based solutions.”



**Brett McCoin**

Director, Business Development

**“Proven Experience** – Our Drupal experts specialize in building easy to use, flexible, and extendable Drupal applications that empower marketing and technology teams to surpass their digital priorities.”

## About Ameex

Ameex Technologies is a digital transformation and delivery partner helping clients ideate, design, build, and deploy next generation, deeply integrated digital technology solutions. Established in 2007, we bring together content, commerce, and technology to deliver an omnichannel experience to our clients.

Our industry knowledge combined with our deep expertise in leveraging standardized processes, automation, data-driven analytics, and artificial intelligence/machine learning allows us to deliver a personalized experience across different platforms.



### About the Author

#### Delona Lang

Director – Partnerships and Customer Success | Ameex Technologies Corp

Delona is the Director of Partnerships and Customer Success with Ameex. She has more than 10 years of experience in helping clients deliver Drupal-based digital solutions and has been an integral part of the Drupal Organization for over five years.

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