



**39 DEGREES NORTH**

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## Client Overview

**Client Name:** 39 DEGREES NORTH

**Website:** <http://39dn.com/index.html>

**Description:** 39 DEGREES NORTH develops Web and Mobile location applications using ArcGIS Server. 39DN was the recipient of the prestigious Excellence in GIS Award at the 2014 Indiana GIS Conference. Their enterprise-GIS applications are built on the ESRI platform. They specialize in developing and implementing software for managing Geographic Information Systems (GIS). 39DN provides system architecture and geo database design. From data stewards managing their information to citizens entering complaint tickets, it allows users to engage in real-time collaboration, eliminating the need to synchronize each computer.

## Project Business Goals:

The project business goals were to develop:

### User Administration System-

- A powerful user-administration system, that runs as a secure IIS Website with a custom binding (custom.customdomain.com) and it will not be the default website.
- The CMS system will be used for unlocking and granting access to features that are not available to the public. It should allow user to secure sensitive information by setting up Protected Layers. Only the registered users you specify will have access to such layers. Once user's data is secured in this way, the general public will not have access to it.
- The ColdFusion services built while creating the CMS should also serve for the Flex Application. The difference is that some services needed for the Flex part should not require authentication and be exposed as public services.

### User Subscription Module-

- The End User's Subscription UI allows users to subscribe to plans of GIS services, add or modify credit card details that are saved in Stripe and also track the subscription history.
- Stripe Payment Gateway Implementation

## Technical Overview / Work Scope:

### **Project Technologies:**

- ColdFusion 10
- Advanced CRUD application using CF ORM
- Kendo UI
- SendGrid API
- Stripe Payment Gateway
- Usage of JavaScript, JQuery, Ajax and JSON
- Version Control – SVN repository
- MS SQL Server 2012

### **Work Scope:**

1. Understanding & analysis of the client's requirement
2. Developing prototypes to confirm technical feasibility
3. Requirement Analysis
4. UI/UX Design
5. Impact Analysis
6. Development
7. Testing/QA
8. Deployment
9. Maintenance & Support

## Key Challenges:

- Both the user administration and end user subscription UI was developed from scratch.
- Implementation of SendGrid API to send bulk emails like one to two thousand or sometimes even more per month in a day without any failure.
- Implementation of Kendo UI's server side paging for pagination, i.e. only the requested data is retrieved at a time instead of the whole data at once. Which helps in speeding up the page load time.
- Implementation of Stripe payment gateway to save and handle user credit card details, subscription plans.
- Optimization of database design and queries for easy handling and performance improvement of the application
- ColdFusion's Web socket implementation at User Subscription Site for ensuring the single user log in at a time

## Summary:

The application was developed in various phases. Client initially approached us for the development of the user-administration section. Based on the high performance quality and satisfaction that the client received from us, he later on approached for the implementation of the User Subscription Site along with the extension of some of the modules of the user-administration section. The project is near completion.