



IlluminatePossibilities

TheGlobalVariables

Diversity Cyber Council

Illuminating Possibilities



Spotlight App Platform - Proposed Architecture
June 23, 2022

O'REILLY®



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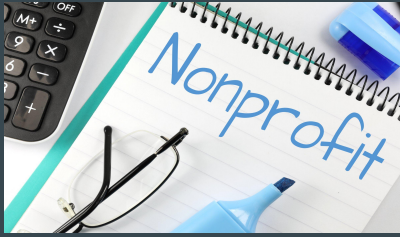
Marc Boudreau
Principal Engineer

Presented by:

TheGlobalVariables

<https://github.com/IlluminatePossibilities/TheGlobalVariables>

Proposed Solution



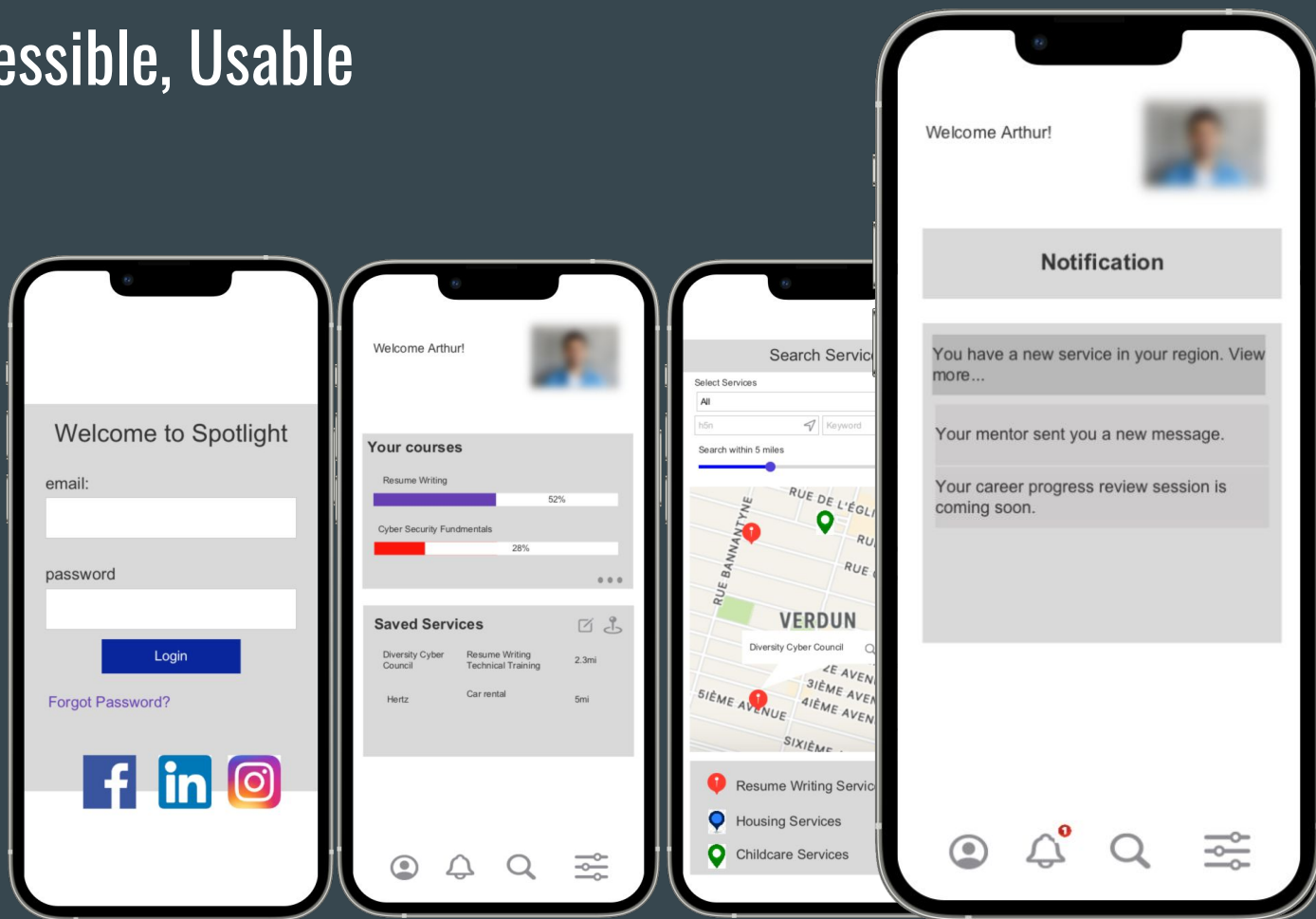
Convenient, Accessible, Usable

SSO Login

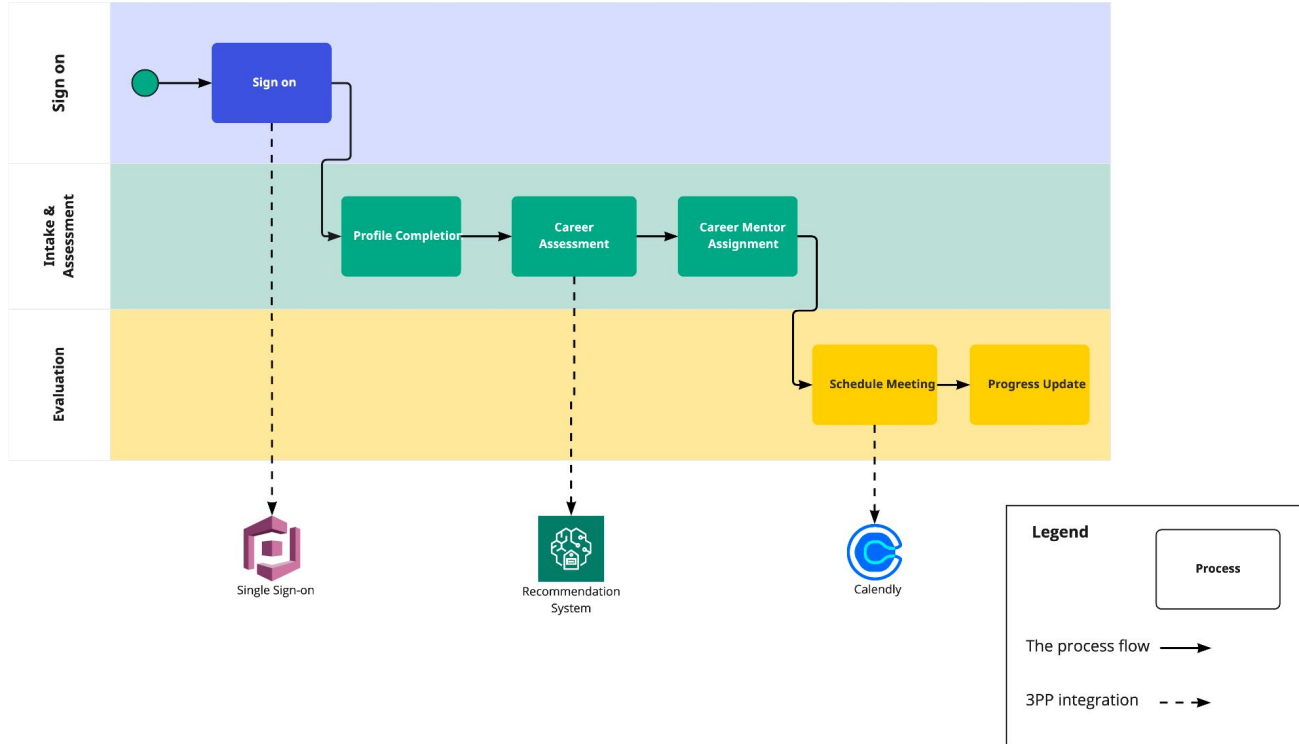
Rich-text editor

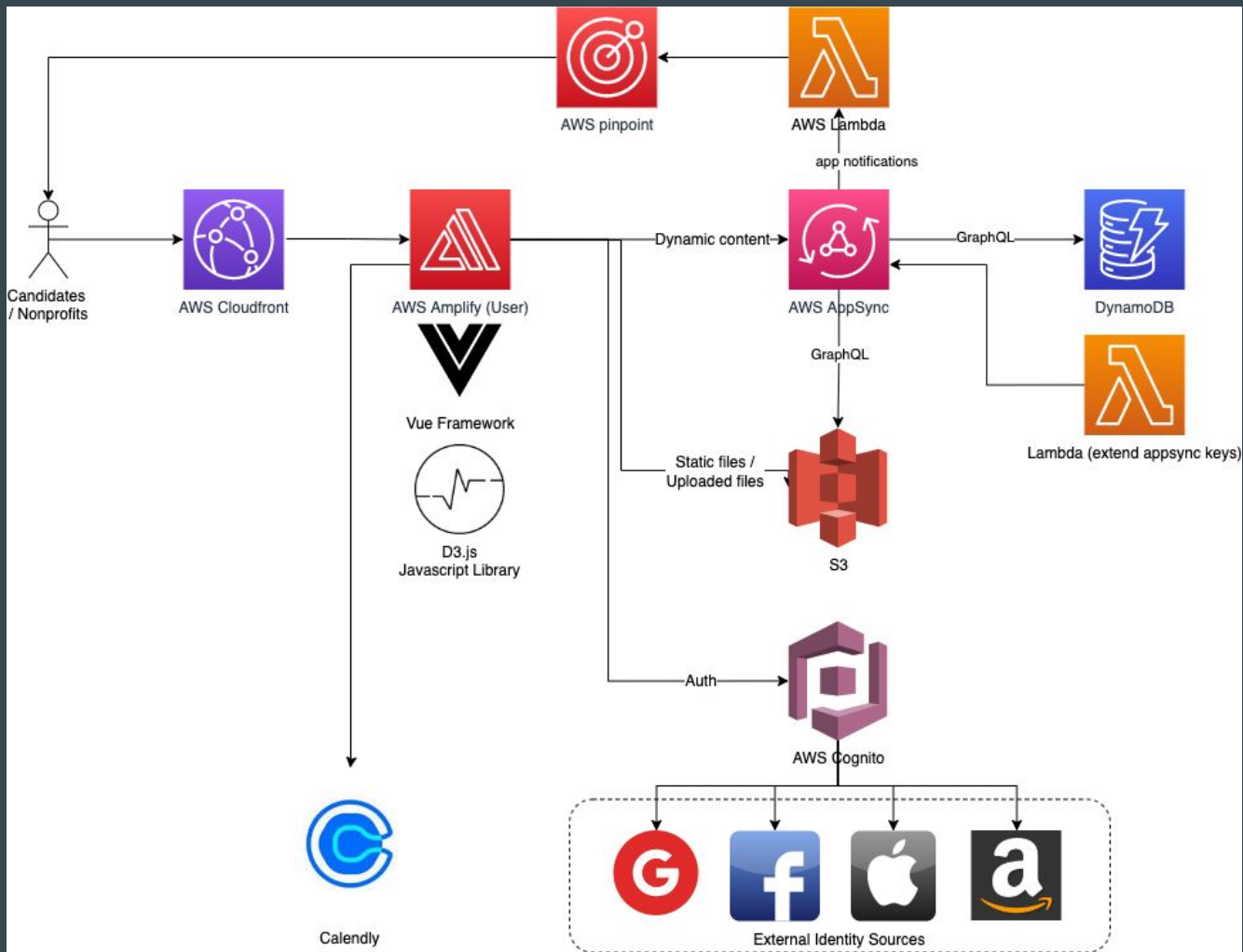
Search services

Map

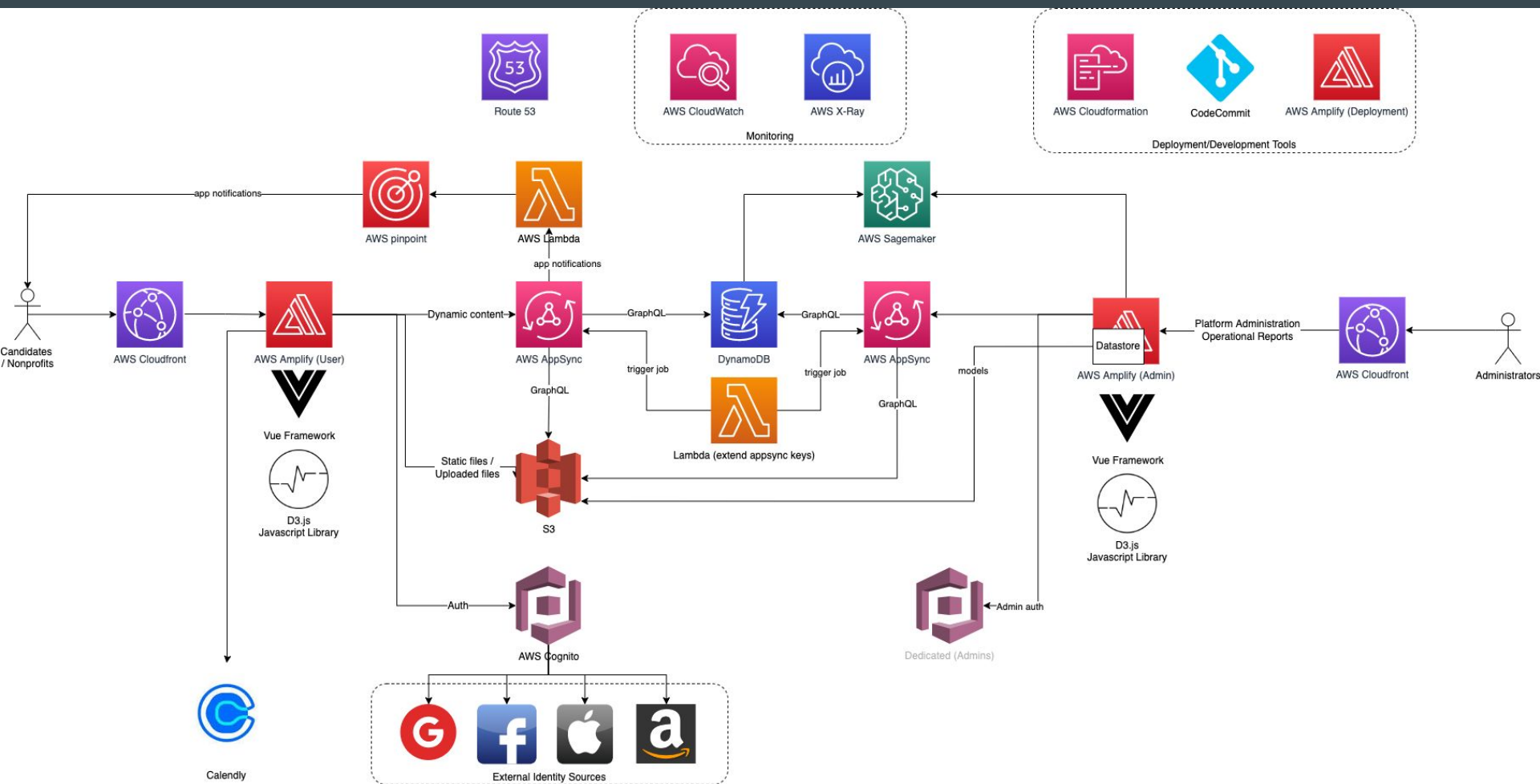


Smarter Recommendations, Effective Collaboration

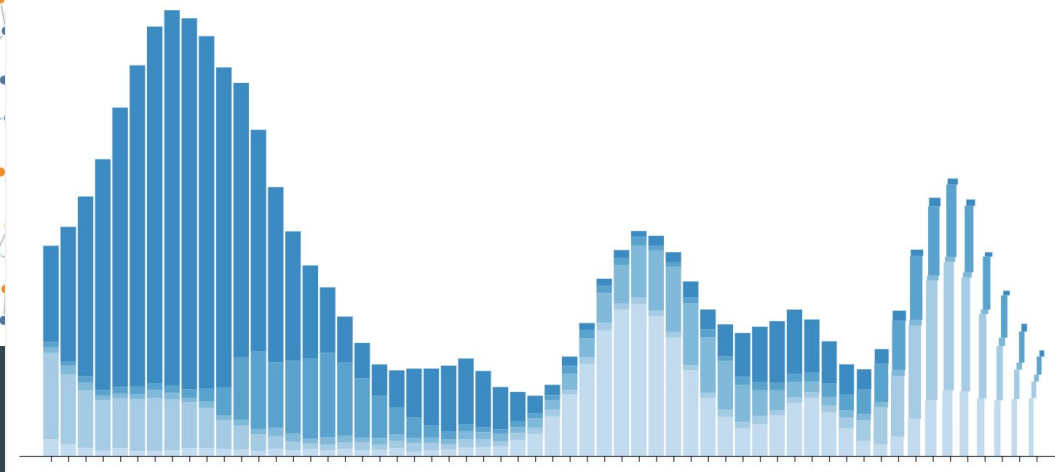
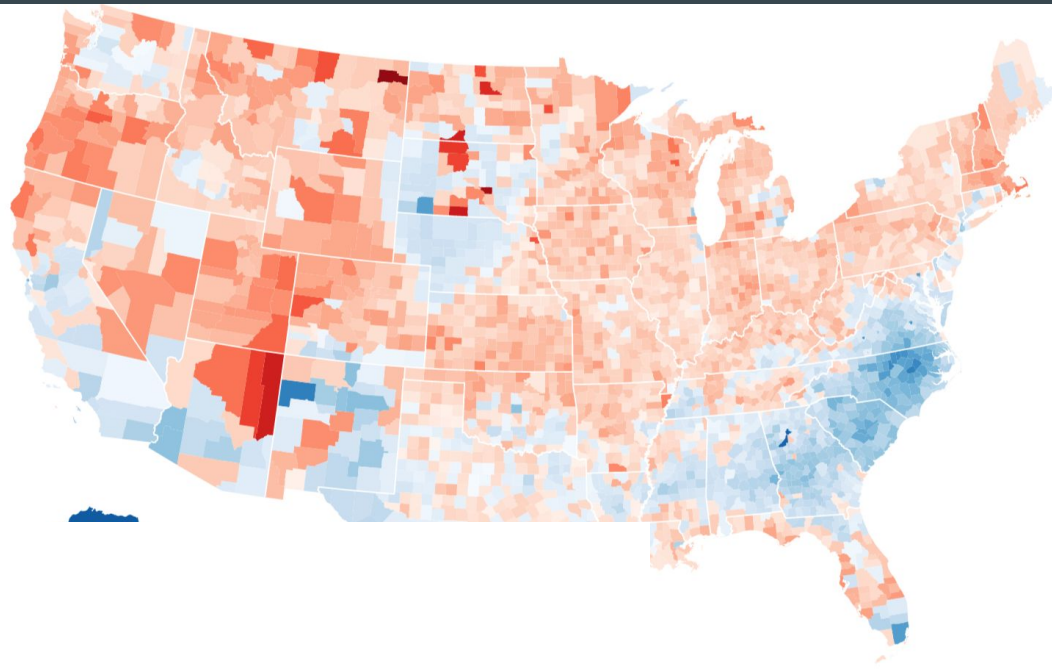
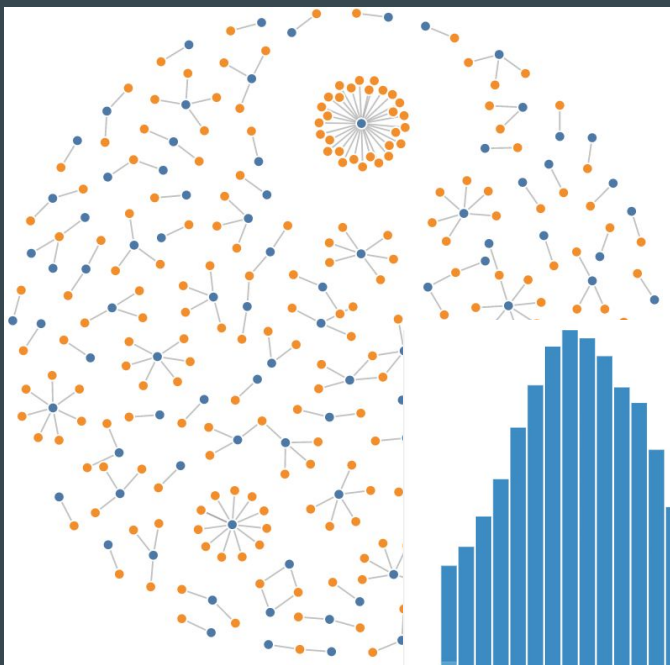




**Cost-Effective,
Serverless
Faster Deployment**



Reporting



Prioritized Architectural Characteristics

- Usability
- Responsiveness
- Feasibility
- Elasticity
- Security
- Privacy
- Interoperability
- Data Integrity

Architecture Styles Worksheet

System/Project: Diversity Cyber Council Proposal

Architect/Team: TheGlobalVariables

Date: 6/19/2022

Selected Architecture(s):



layered



modular monolith



microkernel



microservices



service-based



service-oriented



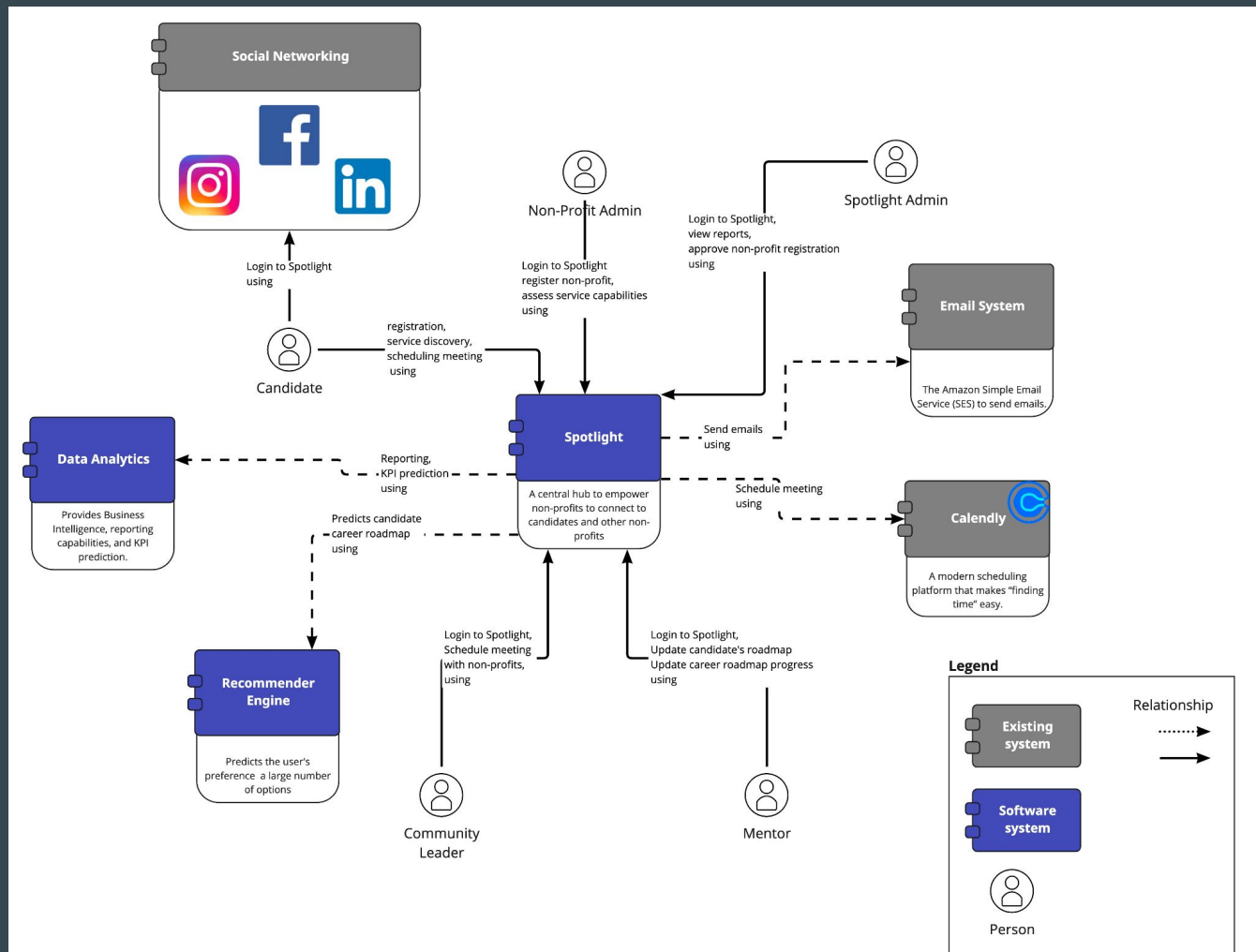
event-driven



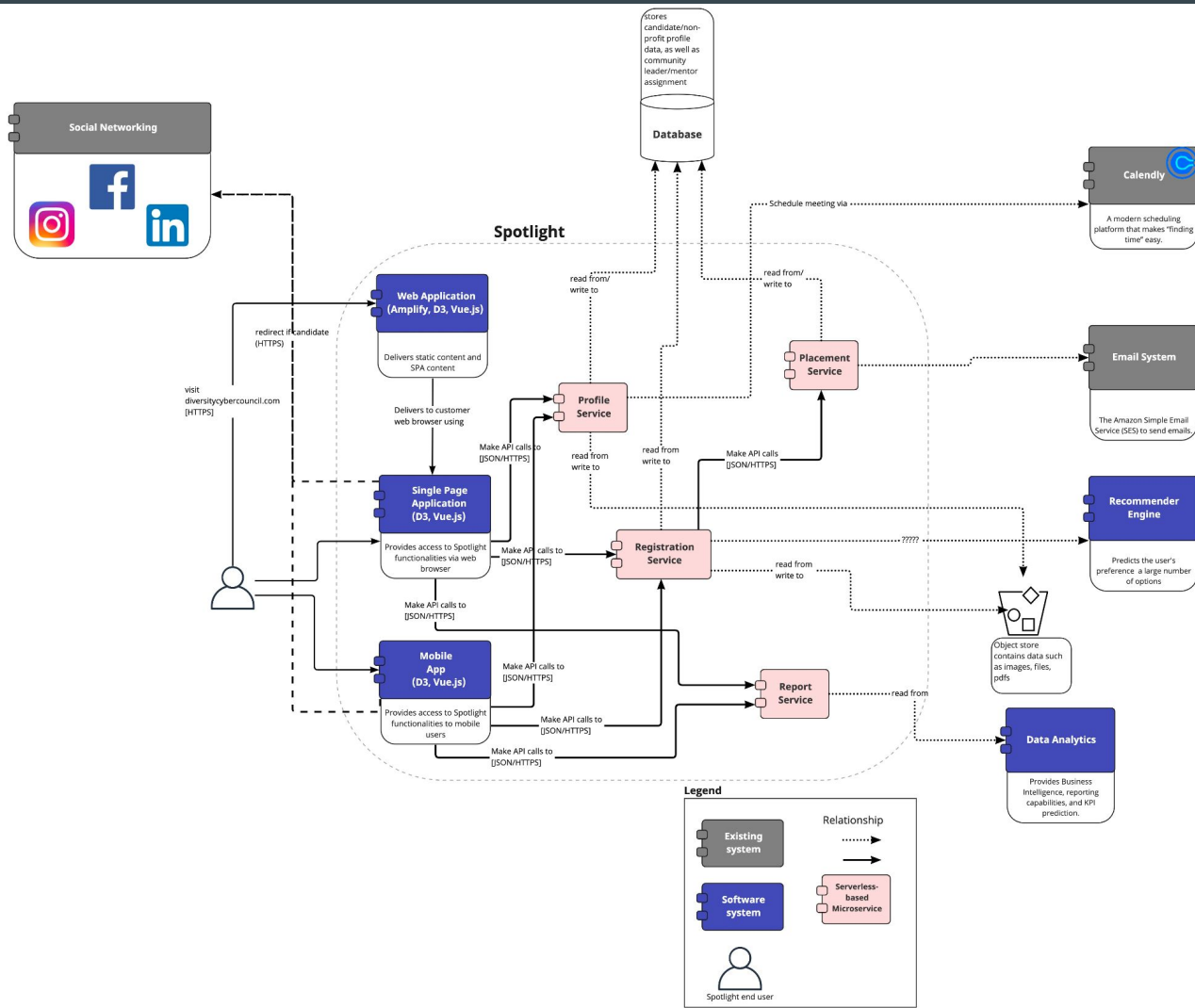
space-based

	layered	modular monolith	microkernel	microservices	service-based	service-oriented	event-driven	space-based
agility	★	★★	★★★	★★★★★	★★★★★	★	★★★	★★
abstraction	★	★	★★★	★	★	★★★★★	★★★★★	★
configurability	★	★	★★★★	★★★	★★	★	★★★	★★
cost	★★★★★	★★★★★	★★★★★	★	★★★★★	★	★★★	★★
deployability	★	★★	★★★	★★★★★	★★★★★	★	★★★	★★★★
domain part.	★	★★★★★	★★★★★	★★★★★	★★★★★	★	★	★★★★★
elasticity	★	★	★	★★★★★	★★	★★★	★★★★★	★★★★★
evolvability	★	★	★★★	★★★★★	★★★	★	★★★★★	★★★★
fault-tolerance	★	★	★	★★★★★	★★★★★	★★★	★★★★★	★★★★
integration	★	★	★★★	★★★	★★	★★★★★	★★★	★★
interoperability	★	★	★★★	★★★	★★	★★★★★	★★★	★★
performance	★★★	★★★	★★★	★★	★★★	★★	★★★★★	★★★★★
scalability	★	★	★	★★★★★	★★★	★★★	★★★★★	★★★★★
simplicity	★★★★★	★★★★★	★★★★	★	★★★	★	★	★
testability	★★	★★	★★★	★★★★★	★★★★★	★	★★	★
workflow	★	★	★★	★	★	★★★★★	★★★★★	★

Context Diagram



Container Diagram



Architecture Decision Records

- ADR 0001 - Choice of Serverless
- ADR 0002 - Choice of Cloud Provider
- ADR 0003 - Process Modeling
- ADR 0004 - Observability
- ADR 0005 - Amplify
- ADR 0006 - Markdown

Major Risks

- Vendor Lock-in
 - AWS Amplify and Serverless: Significant effort to move pipelines, deployment, dependent libraries
 - AWS Cognito: Significant effort and risks in moving local users
- Third-Party Library Updates
 - Amplify and frontend libraries require frequent security updates to mitigate the exploitation of security vulnerabilities.
- Staff Training and Industry Knowledge



Thank you!

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