

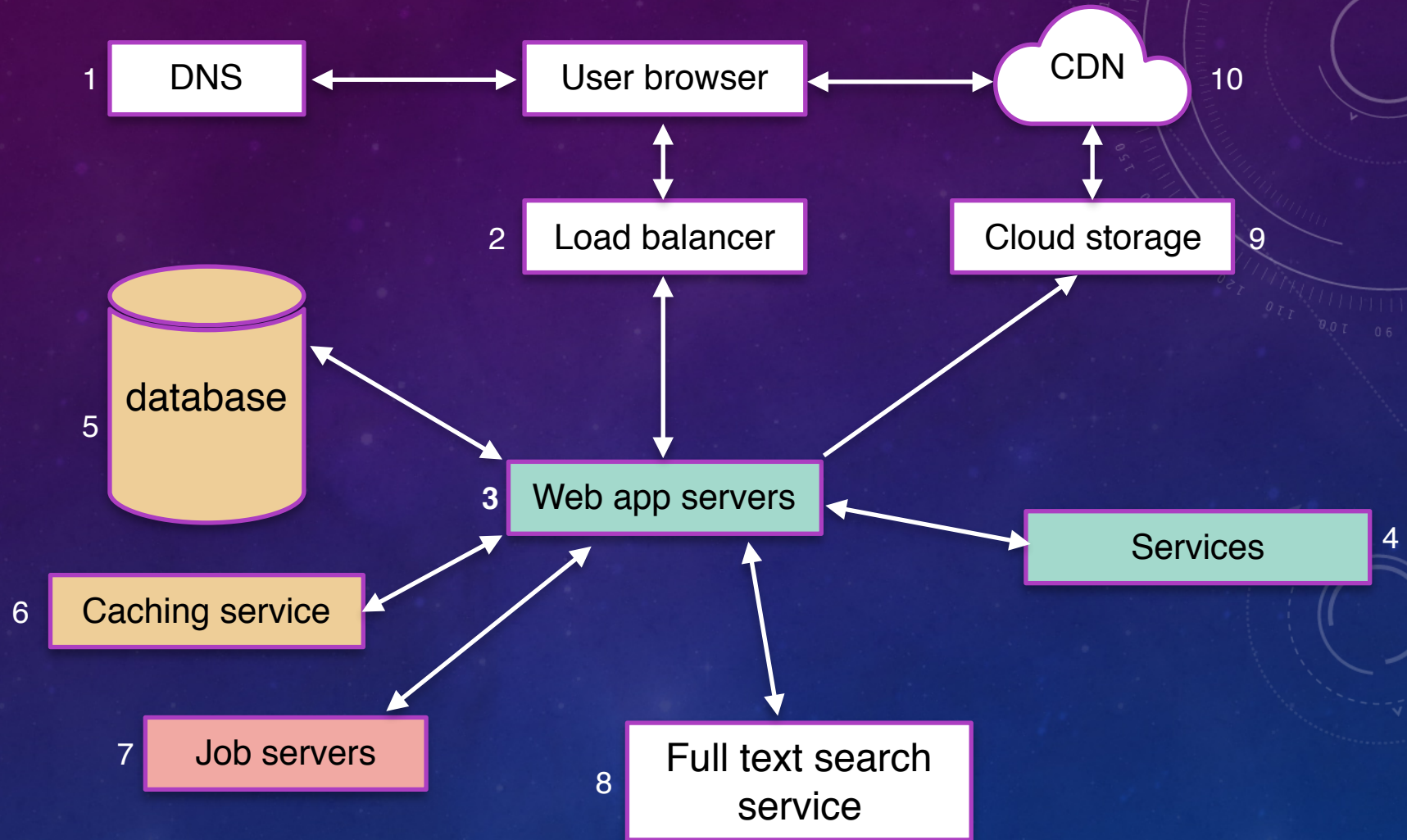
MVP Studio Project Architecture

Justin Pham



- Project Keys
- Property Analysis
- Project Talent
- CI, Continuous Delivery & Continuous Deployment

WEB-APP ARCHITECTURE OVERVIEW



EXPLANATION

1. DNS: Domain Name Server, route domain name to IP address
2. Load Balancer: Balancing requests to multiple servers to make sure none of them is overloaded. Horizontal scaling.
3. Web application servers: Execute business logic that handles user requests and send to user.
4. Database server: database to store information (SQL or NoSQL)
5. Caching server: simple key/value store to save and lookup information
6. Job Servers: Long-processing service do work asynchronously behind the web application



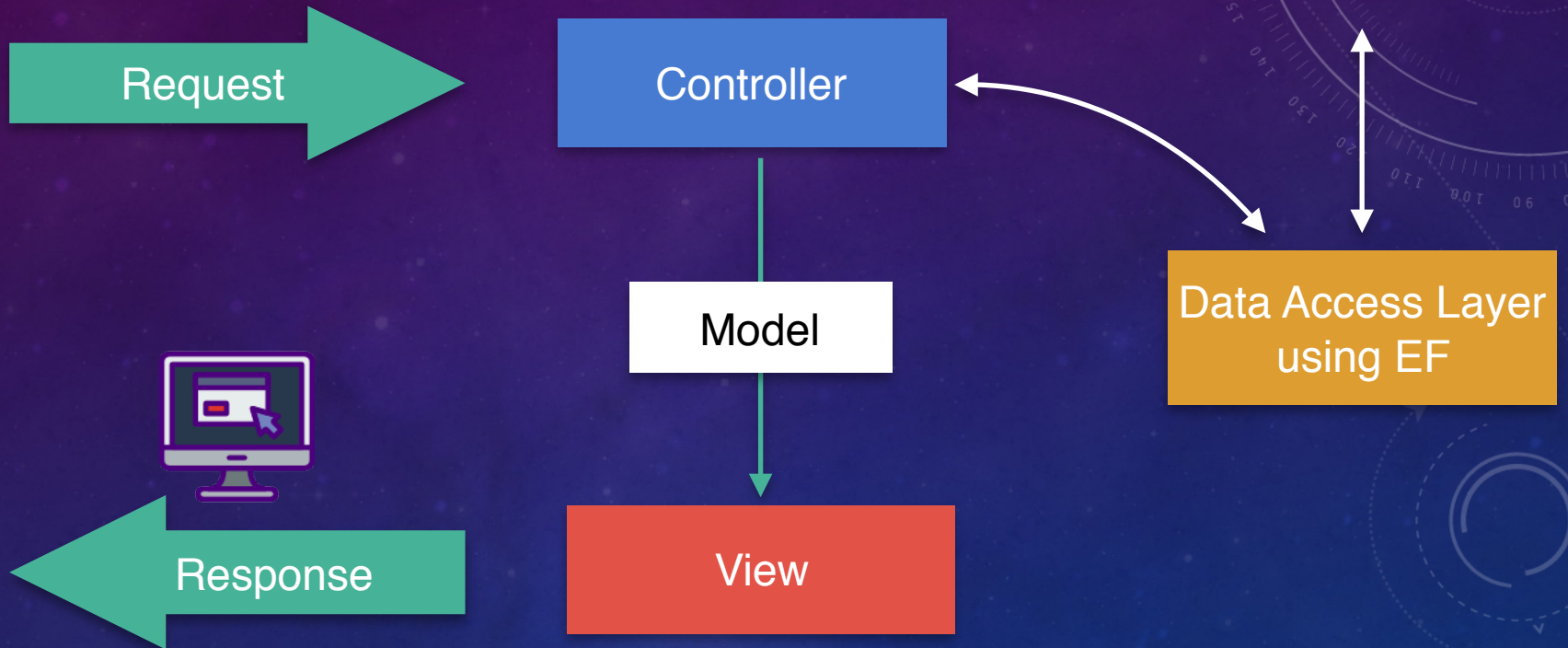
EXPLANATION

- 7. Full-text search service: Leverage inverted index to quickly lookup documents that contain the query keyword
- 8. Services: Separate services to handle different domain logic
- 9. Web application servers: Execute business logic that handles user requests and send to user.
- 10. Cloud storage: simple and scalable way to store, access and share data
- 11. CDN: Distribute web assets to multiple server for faster access.



Project Keys



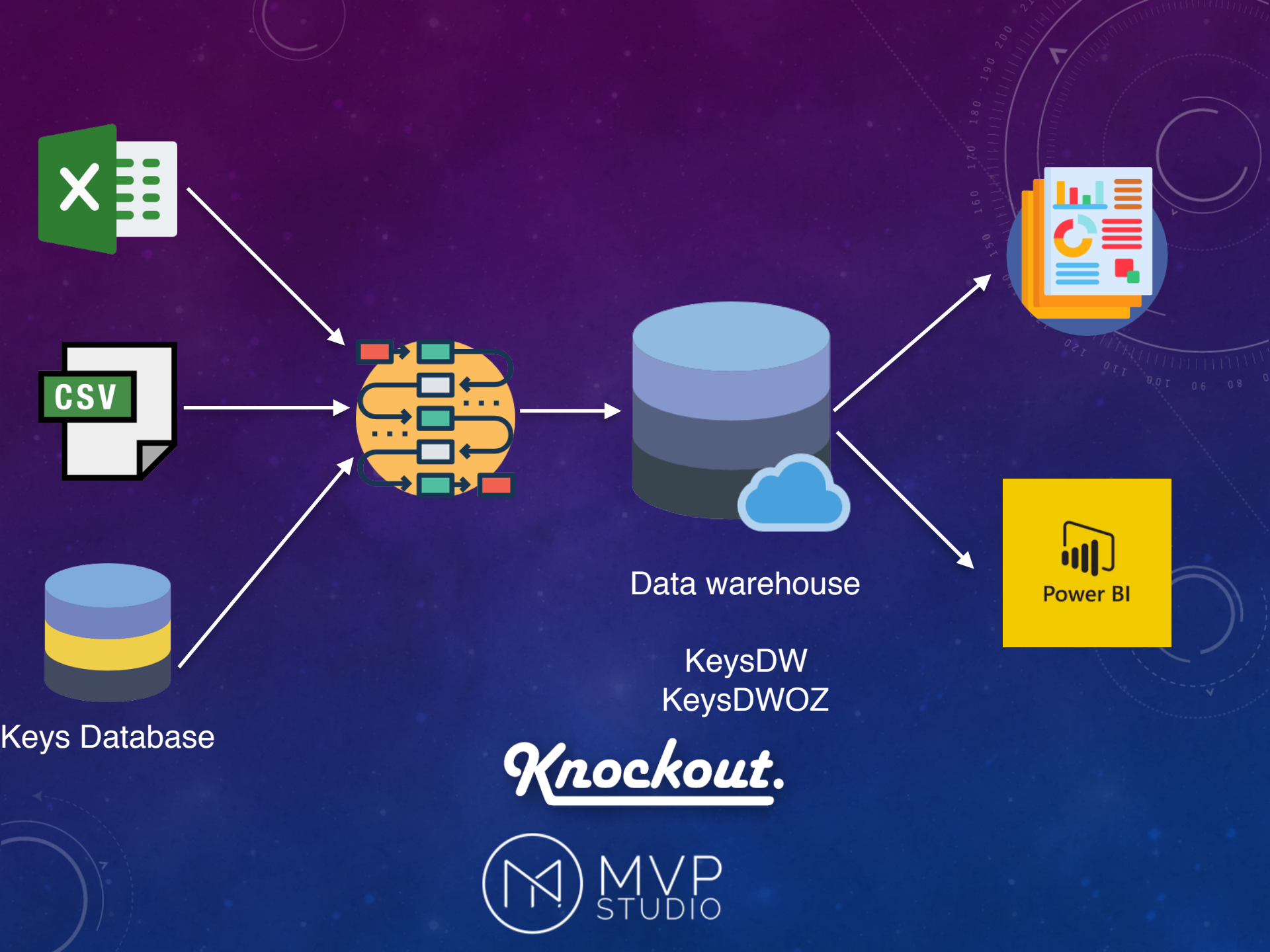


Knockout.



Property Analysis





Data warehouse

KeysDW
KeysDWOZ

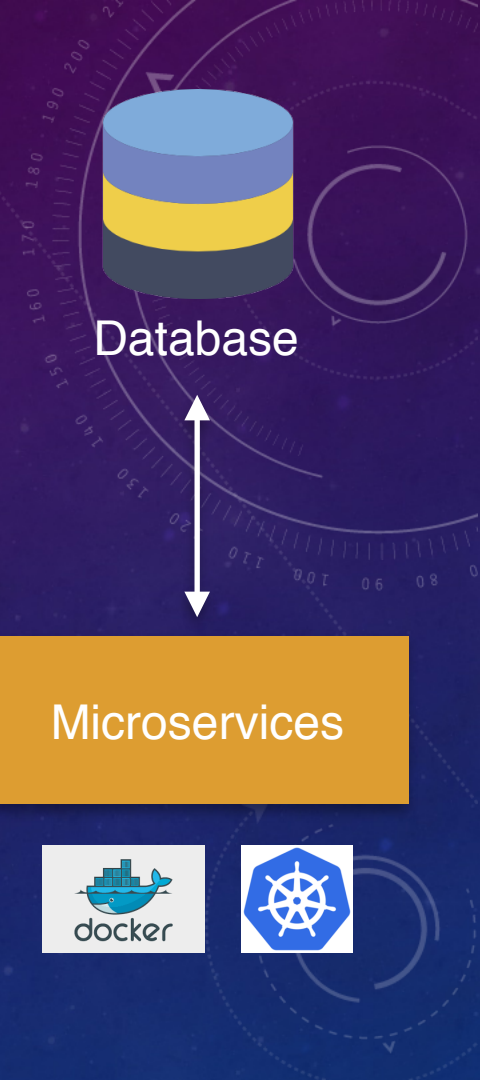
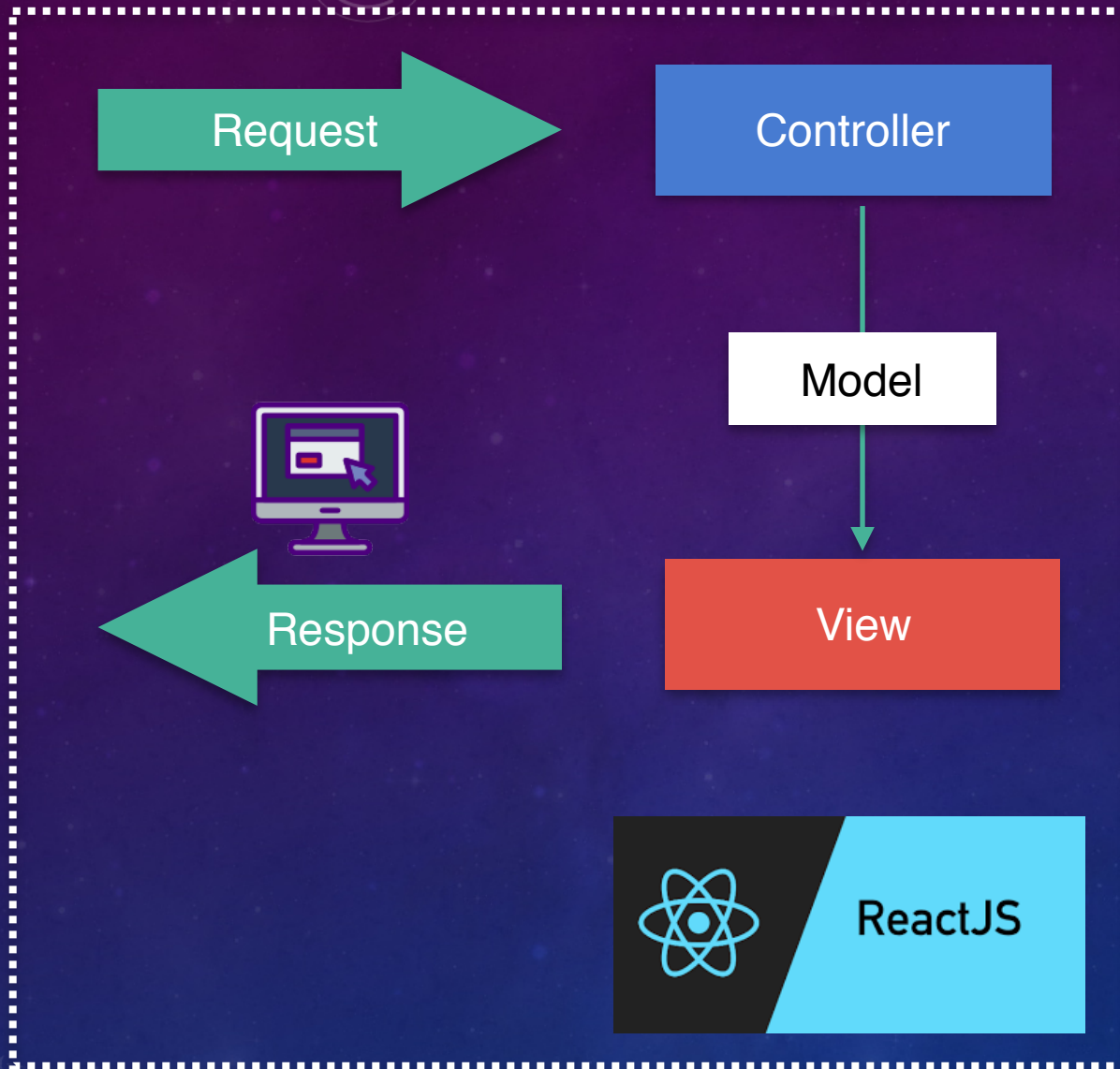
Power BI

Knockout.



Project Mars / Talent





DevOps



- Waterfall — —> Agile — —> DevOps
- The practice that development and operation engineers merge together
- Shorten the gap between development and deployment
- There are 3 main practices that usually discussed in the contexts of DevOps
 - Infrastructure Automation (OS configs, app deployments as code)
 - Continuous Delivery (Build, test, deploy app in a fast and automated manner)
 - Site Reliability Engineering (operate system, monitoring orchestration)

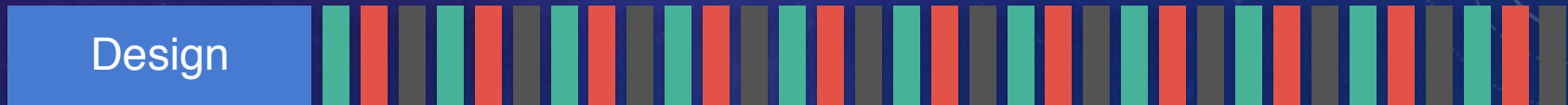
Waterfall



Agile

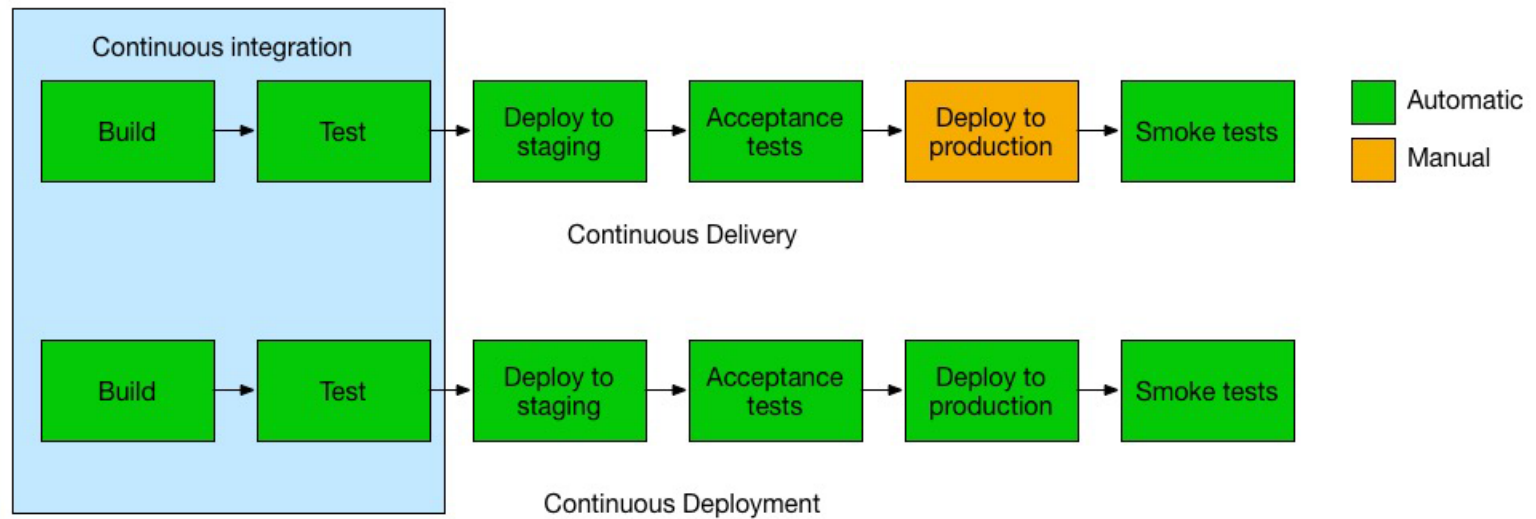


DevOps



Continuous Integration

- Know different type of tests
 - Unit tests - verify behaviour of individual methods or functions
 - Integration tests - behaviour of multiple components
 - Acceptance tests - focus on business cases
 - UI tests - function correctly from a user perspective
 - Performance Tests - server load test
- Running test automatically
 - Services e.g Bamboo, Jenkins, TFS





dotnet build

.NET Core



dotnet publish

.NET Core



Build webpack

Disabled: npm



Build Mars.App.Web image

Docker



Build Mars Listing Image

Docker



Build Mars Identity Image

Docker



Build Mars Profile Image

Docker



Push Mars Web App Image to Registry

Docker



Push Mars Listing Service Image to Registry

Docker



Push Mars Identity Service Image to Registry

Docker



Push Mars Profile Service Image to Registry

Docker



Copy yaml to Artifact

Copy Files

PyCha

↑ All definitions > Mars Deployment

Pipeline Tasks Variables Retention Options History

Artifacts | + Add



Mars-CI Docker
Build



Schedule
not set

Environments | + Add ▾



Dev Environment

1 phase, 3 tasks



Thank you

