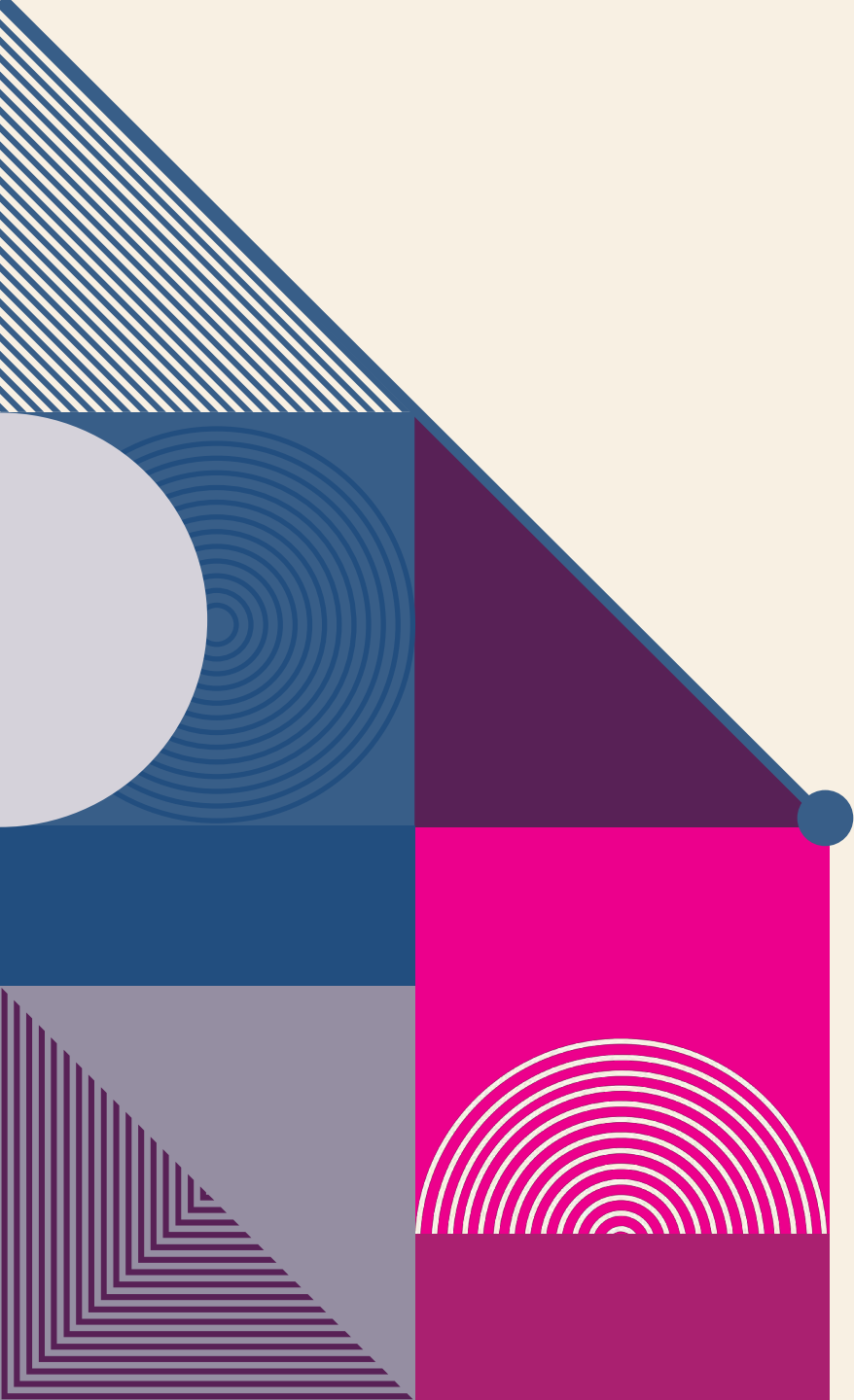# TURBOCHARGED GOLANG

Chidambaram G S (Chids)

Utsav Gupta

AGENDA

Introduction

History and the Current State of the Web

Hotwire and Turbo

Demo

$ WHOAREWE

- Senior Technologists at Infosys.

- Worked in various domains like identity and access management, platform engineering, and AdTech.

- Co-leaders of Gophers Guild at Infosys.

GOPHERS GUILD

- Golang user group at Infosys.

- Consultants to the wider organization on everything Go.
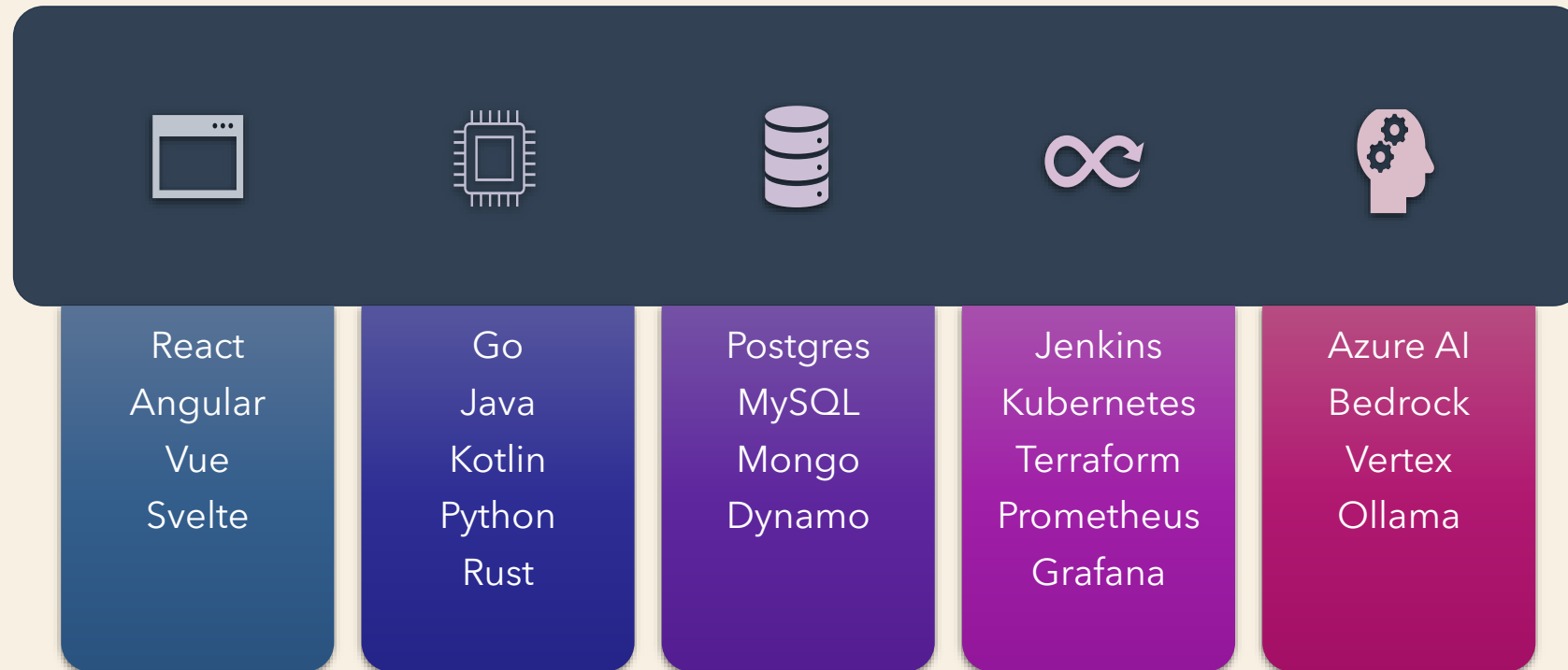
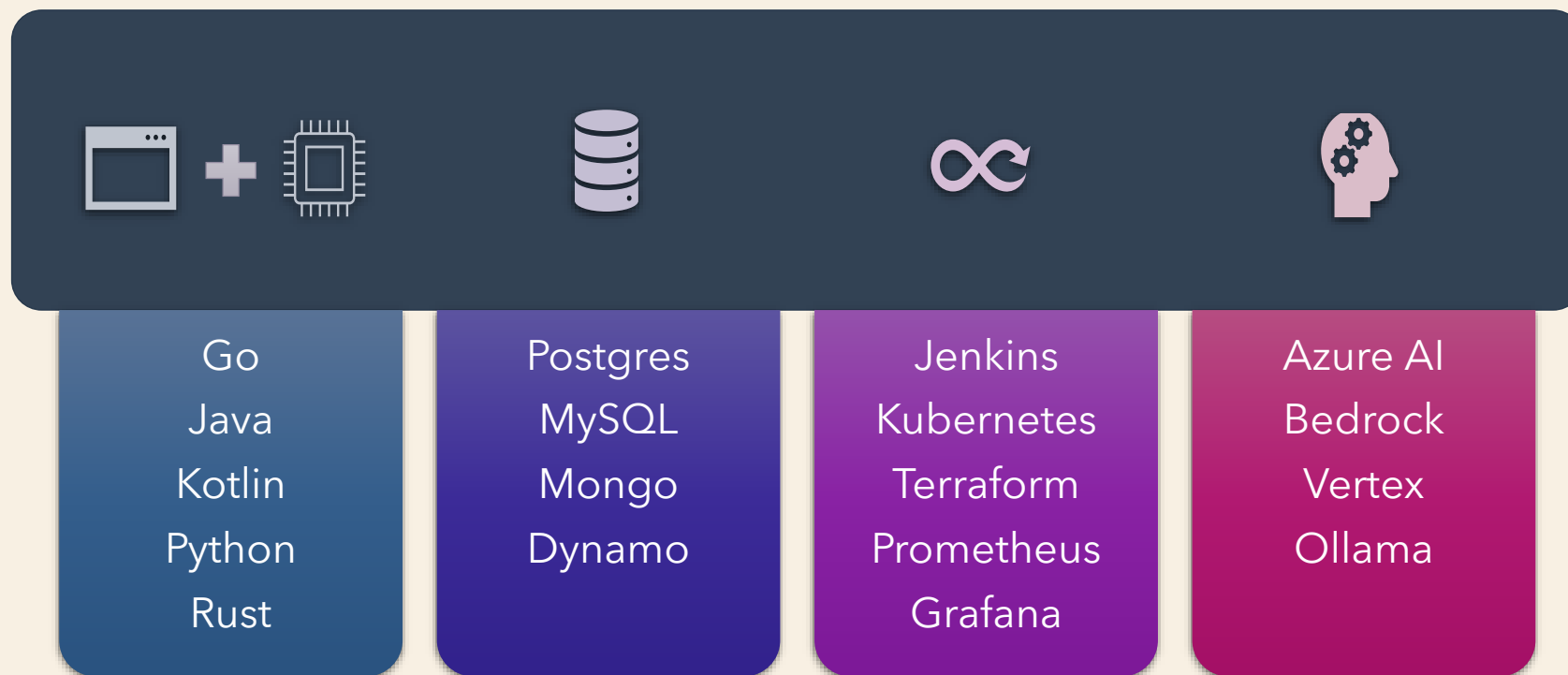- Share ideas and build accelerators.

ACCELERATORS

- Team should be agile.

- Starting big reduces velocity.

- Make lives easier and let the Gophers do what they do best.
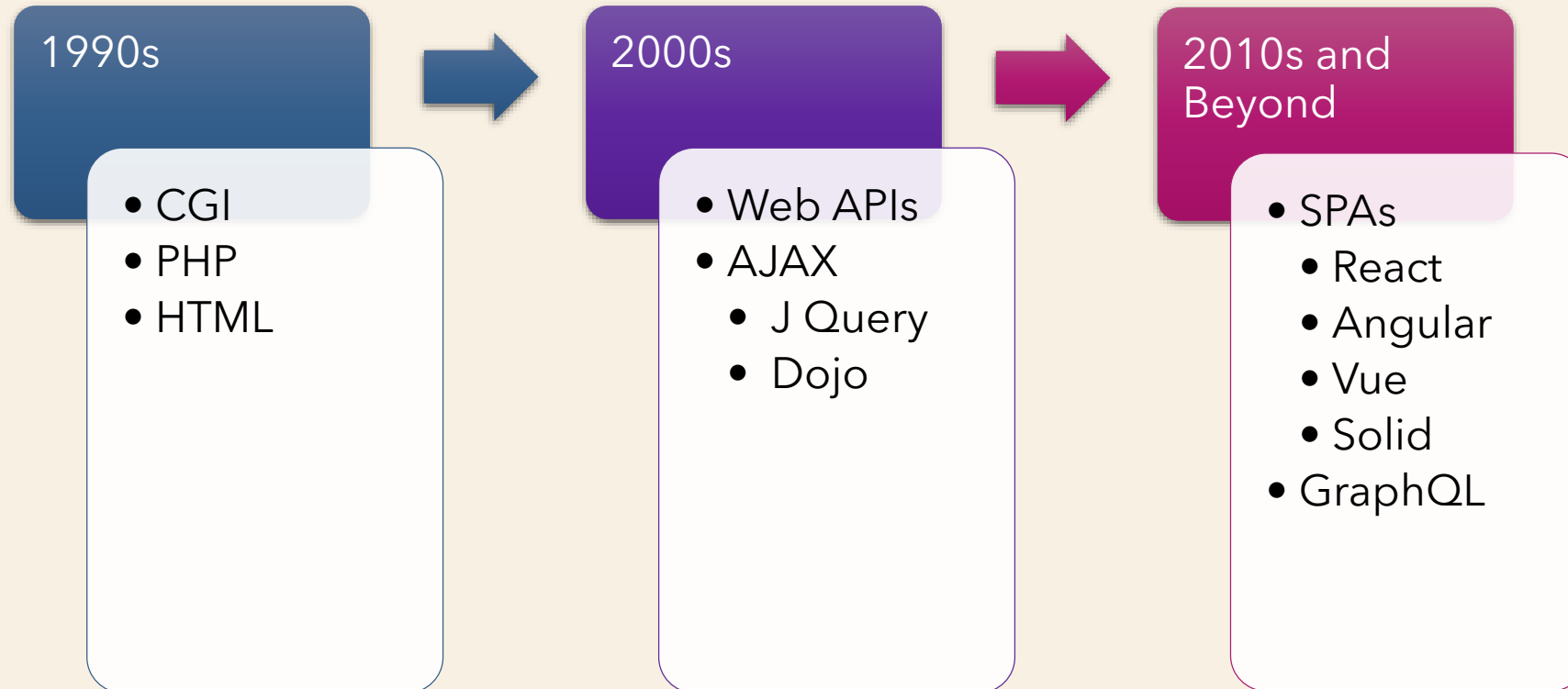
- Side projects should be fun.
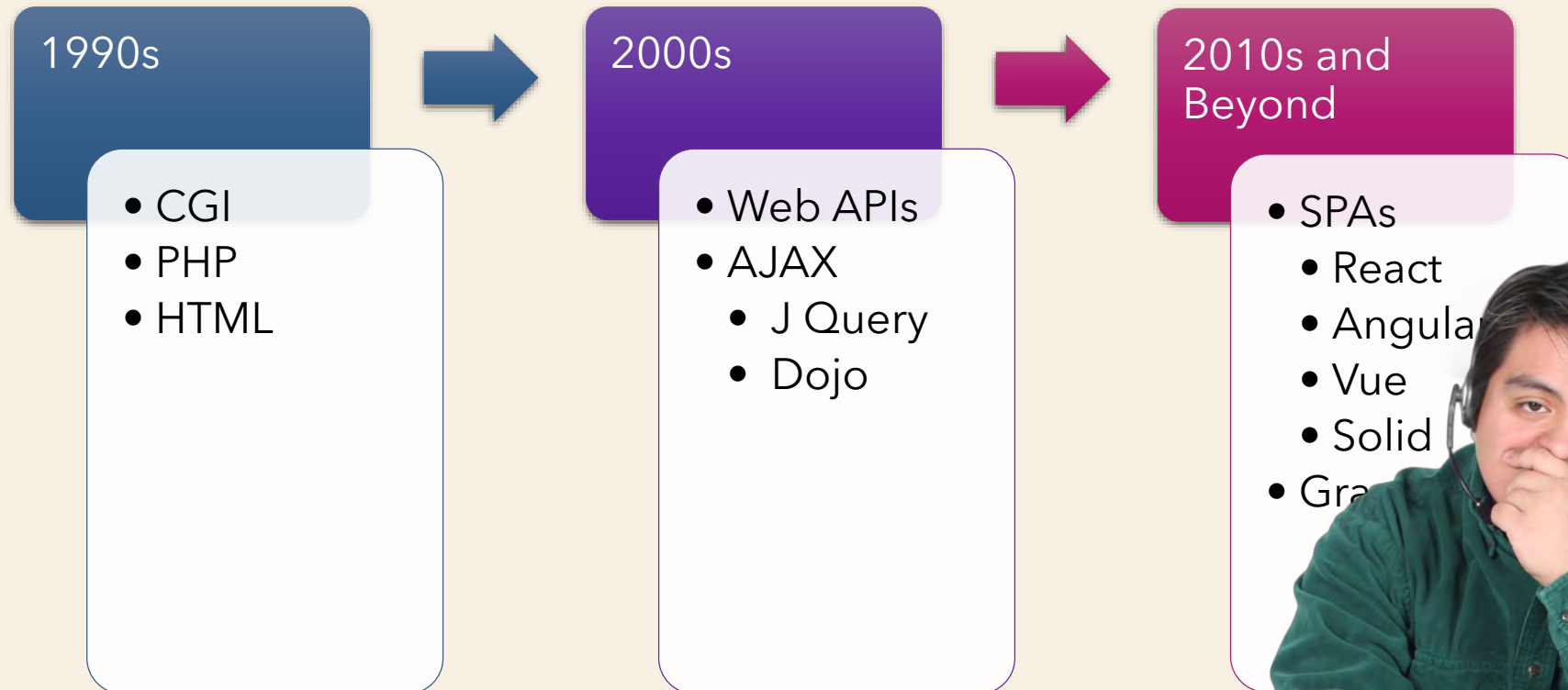
MODERN TECH STACK

React	Go	Postgres	Jenkins	Azure AI
Angular	Java	MySQL	Kubernetes	Bedrock
Vue	Kotlin	Mongo	Terraform	Vertex
Svelte	Python	Dynamo	Prometheus	Ollama
	Rust		Grafana	

MODERN TECH STACK

Go Java Kotlin Python Rust	Postgres MySQL Mongo Dynamo	Jenkins Kubernetes Terraform Prometheus Grafana	Azure AI Bedrock Vertex Ollama

EVOLUTION OF THE WEB

1990s
- CGI
- PHP
- HTML

2000s
- Web APIs
- AJAX
  - J Query
  - Dojo

2010s and Beyond
- SPAs
  - React
  - Angular
  - Vue
  - Solid
- GraphQL

EVOLUTION OF THE WEB

1990s →

- CGI
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2000s →

- Web APIs
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2010s and Beyond

- SPAs
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- Gra

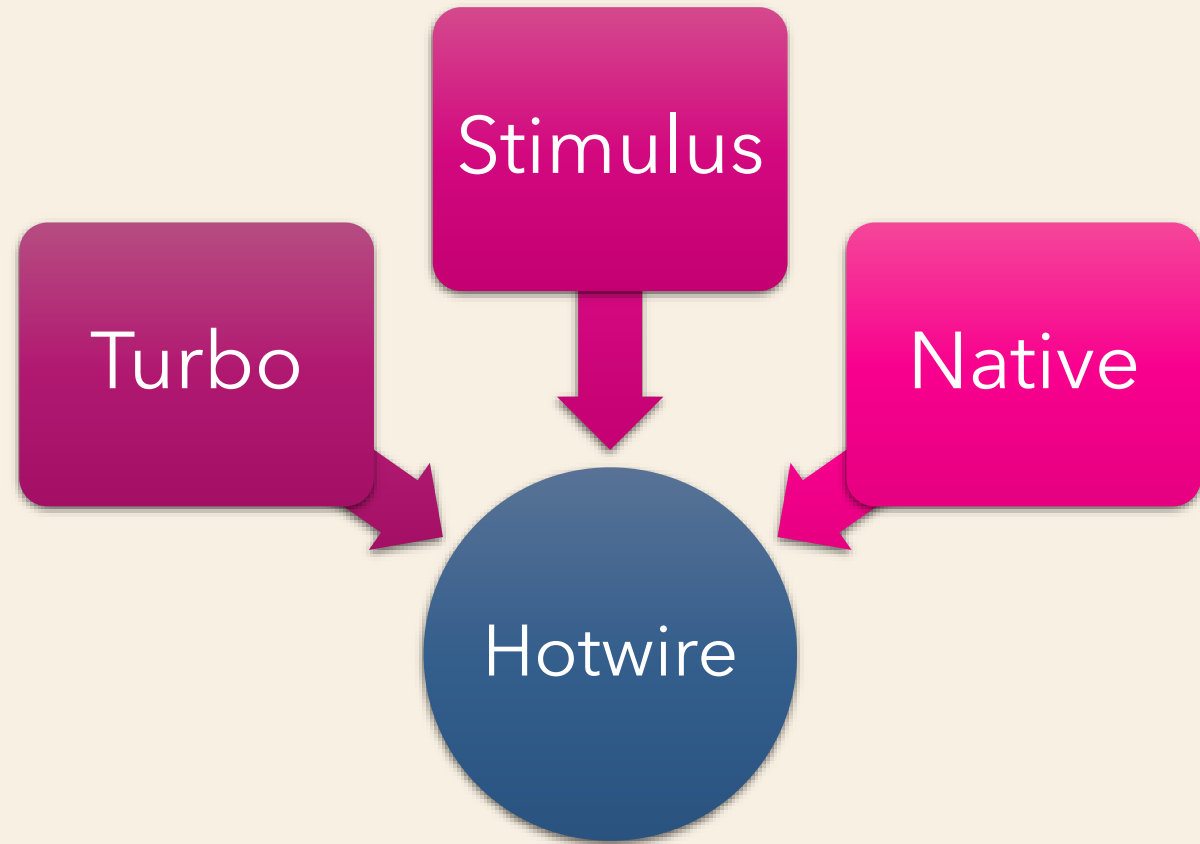# CAN WEB DEVELOPMENT BE FUN AGAIN?

ROCA STYLE GUIDE

- Resource-Oriented Client Architecture.

- Recommendations for Web Application Frontends.

- Unobtrusive JavaScript.

- Progressive Enhancements.
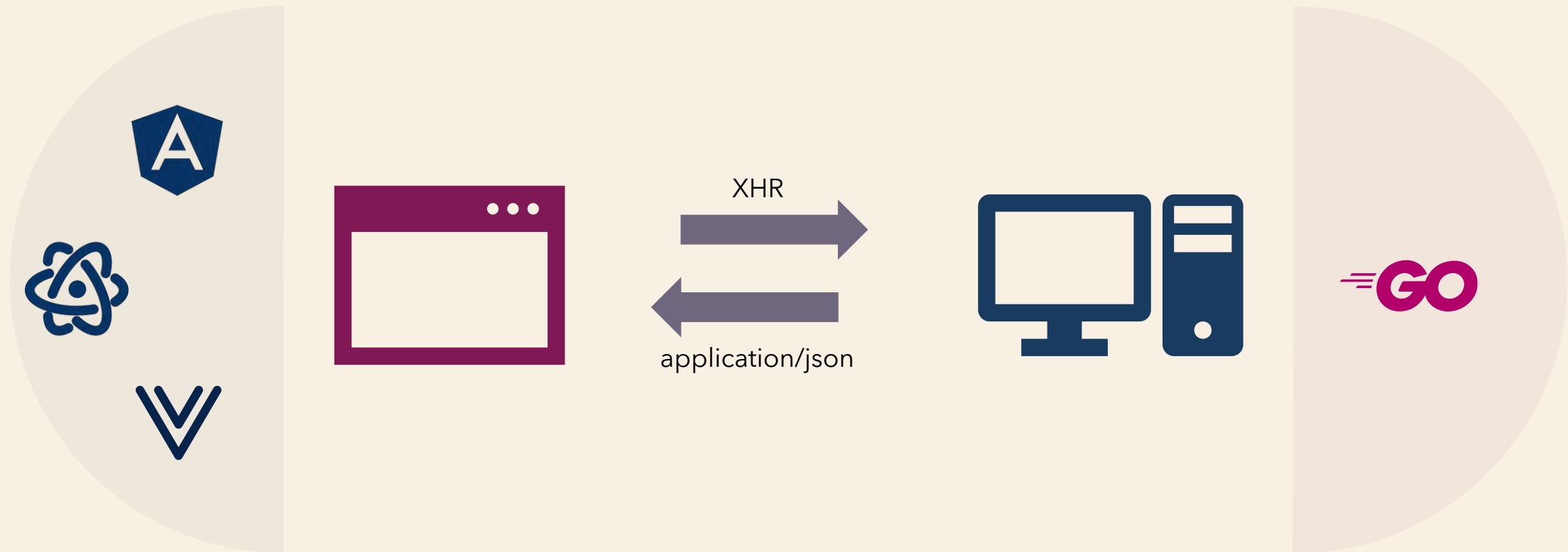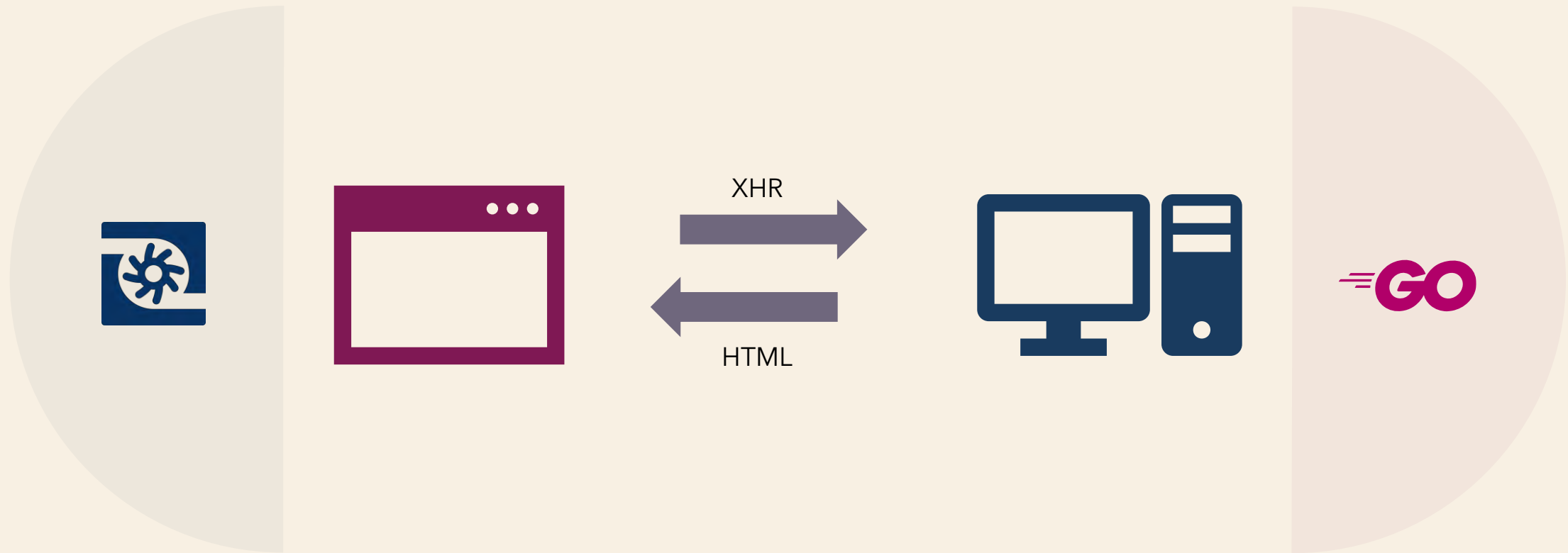
- POSH (Plain Old Semantic-HTML).

HOTWIRE

- HTML Over The Wire.
- Toolkit based on the POSH pattern.
- Part of the Rails ecosystem.

SPA

XHR

application/json

HOTWIRE

XHR

HTML

TURBO FRAMES

```html
<h1> Welcome to the Hotwire Demo</h1>

<turbo-frame id="message">
</turbo-frame>

<form action="/greet" method="post" data-turbo-frame="message">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name">
        <input type="submit" value="Greet">
</form>
```

TURBO FRAMES

```html
<h1> Welcome to the Hotwire Demo</h1>

<turbo-frame id="message">
        <p>Hello, John Doe!</p>
</turbo-frame>

<form action="/greet" method="post" data-turbo-frame="message">
        <label for="name">Name:</label>
        <input type="text" id="name" name="name">
        <input type="submit" value="Greet">
</form>
```

TURBO STREAMS

```html
<h1> Welcome to the Hotwire Demo</h1>

<div id="message"></div>

<form action="/chat" method="post">
        <label for="message">Message:</label>
        <textarea id="message" name="message"></textarea>
        <input type="submit" value="Send">
</form>
```

TURBO STREAMS

```html
<h1> Welcome to the Hotwire Demo</h1>
<div id="messages">
        <p>User: Can you generate the transaction report?</p>
</div>
<form action="/chat" method="post">
        <label for="message">Message:</label>
        <textarea id="message" name="message"></textarea>
        <input type="submit" value="Send">
</form>
```

TURBO STREAMS

```
<h1> Welcome to the Hotwire Demo</h1>

<div id="messages">

        <p>User: Can you generate the transaction report?</p>

        <p>Bot: Sure. Let me gather the details.<p>

</div>

<form action="/chat" method="post">
        <label for="message">Message:</label>
        <textarea id="message" name="message"></textarea>
        <input type="submit" value="Send">
</form>
```

TURBO STREAMS WS + SSE

```html
<h1> Welcome to the Hotwire Demo</h1>

<div id="messages">
```

<p>User: Can you generate the transaction report?</p>

<p>Bot: Sure. Let me gather the details.<p>

<p>🔔 **Notification:** The pdf can now be downloaded.</p>

```html
</div>
<form action="/chat" method="post">
        <label for="message">Message:</label>
        <textarea id="message" name="message"></textarea>
        <input type="submit" value="Send">
</form>
```

DEMO

THE JOURNEY SO FAR

- Adopted the ethos of progressive enhancement and unobtrusive Javascript.

- One repo and one pipeline for the application.

- Almost 50% reduction in development effort.

- Happy Gophers!

THANK YOU

REFERENCES AND LINKS

- ROCA: Resource-oriented Client Architecture
- HTML Over The Wire | Hotwire
- Stimulus 3 + Turbo 7 = Hotwire 1.0
- Chids-gs/go-chat-turbo