

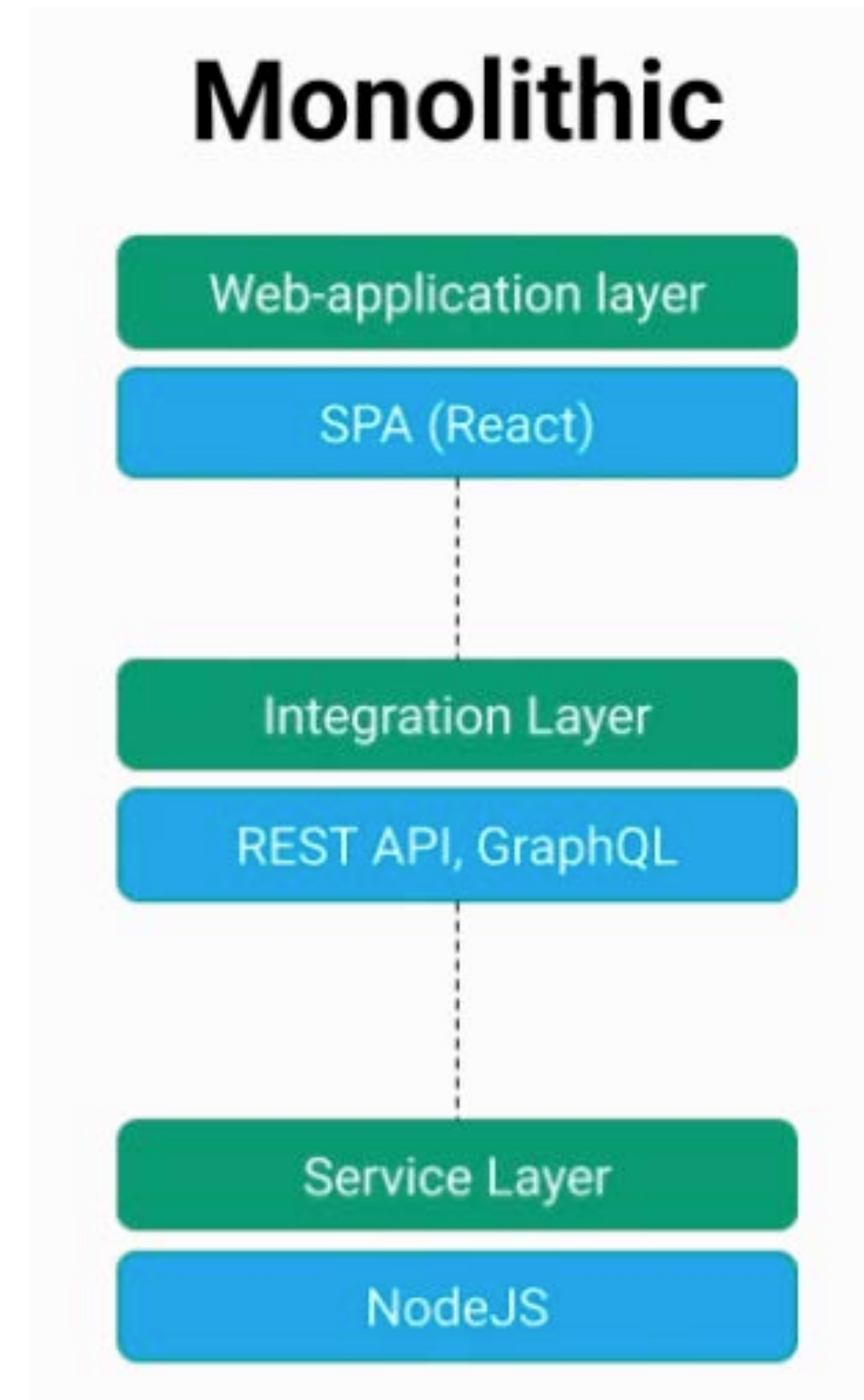
Harnessing Microfrontends

Building Scalable, Reliable, and Secure Platforms for Complex Web Applications.

The Challenges of Complex Web Applications

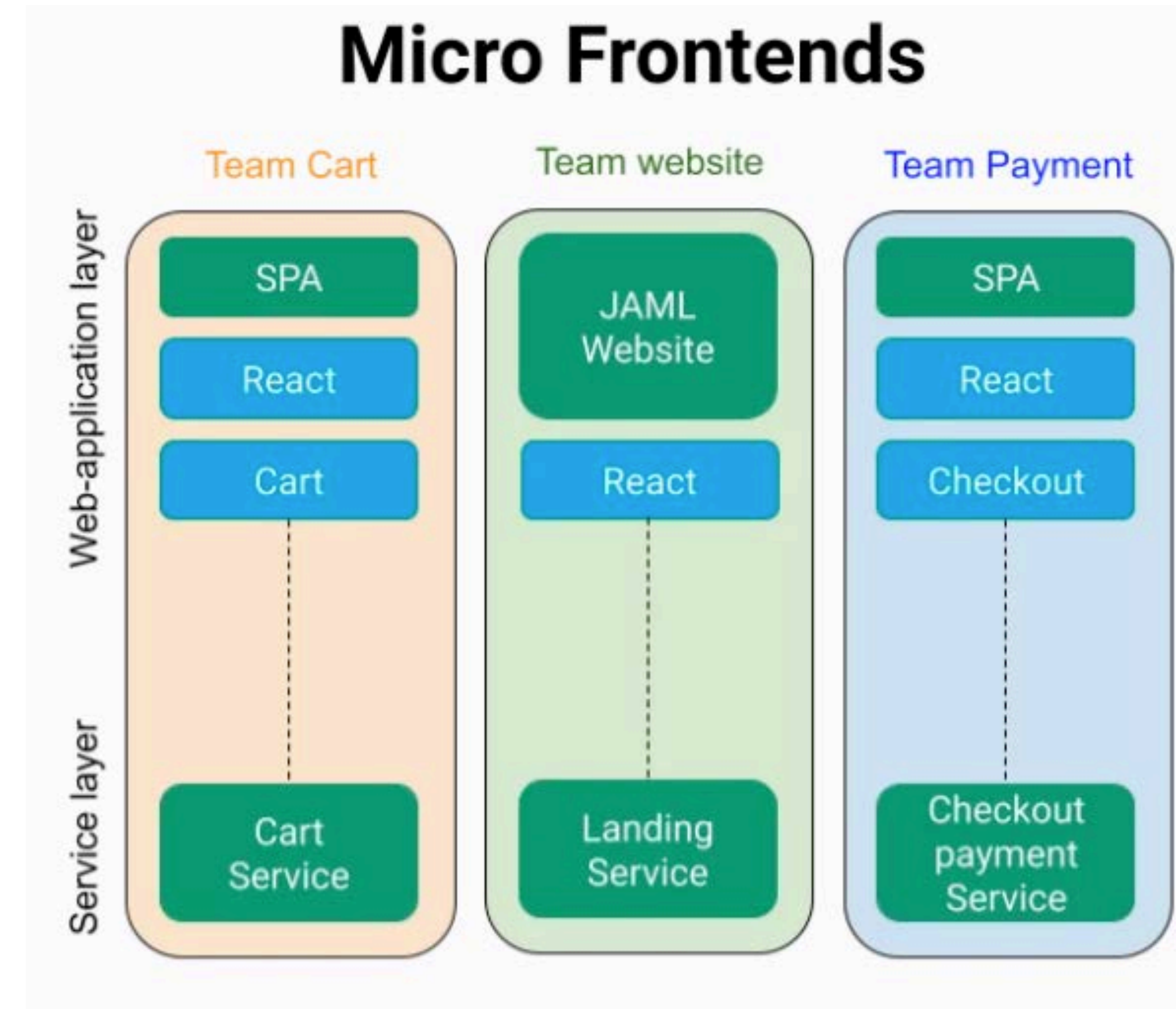
- **Traditional Monolithic Architecture:**

- Tightly Coupled Codebases and Scaling Issues.
- Slow Development and Deployment Cycles.
- Cascading failures.
- Lack of flexibility in Technology.
- Team coordination challenges.



Power of Microfrontends

- Independent Scalability and Deployability.
- Smaller Codebases for Faster Development Cycles.
- Resilience and Fault Tolerance.
- Technology Agnosticism.
- Scalability at Every Level.



Implementing Microfrontends: Best Practices and Challenges

- Choose the Right Architecture Pattern. (Vertical vs Horizontal).
- Establish Clear Communication and Contract Boundaries (API Contracts).
- Cross-Microfrontend Communication and Shared State.
- Maintain Consistent User Experience (Design System and shared components).
- Security Considerations (Authentication and Authorization).

Summary

- What are Microfrontends?
- Key Benefits: Independent Scalability, Faster Development Cycles, Reliability, Technology Agnostic.
- Best practices and challenges: Choose the Right Architecture Pattern, Establish Clear Communication, Ensure Consistency.
- Real Worlds Examples: Spotify, Amazon, IKEA, DAZN.
- Final Thoughts.

Thank you.