

WSO2con2025

API-First Architectures for Modernization



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Modernization is not a luxury; it's a necessity



Why Modernization? The Compelling Need



Key drivers for modernization

- Agility
- Better customer experience
- Accelerated Innovation
- Rapid market entry
- Better security posture
- Sustainability



API-First Modernization

The background is a vibrant space-themed gradient. It transitions from a bright orange-red on the left to a deep blue and purple on the right. Scattered throughout are numerous stars of varying sizes and colors, some with prominent four-pointed diffraction patterns. In the lower-left corner, there is a large, teal-colored planet with a thin, dark ring. In the lower-right corner, there is a smaller, purple planet with a thin, light-colored ring.

What is API-First?

- **API-First: A Strategic Vision**
 - Reimagining Business Capabilities
 - Future-Proofing Your Business
- **API-First: Methodology**
 - APIs as digital Products
 - Design Before Implementation
 - Contract-Driven Development



Roadmap to API-First Modernization

The background is a vibrant space-themed gradient transitioning from orange-red on the left to dark blue and purple on the right. It is filled with numerous small white stars and several larger, stylized planets. A large teal planet with a ring is positioned in the lower-left, and a smaller purple planet with a ring is in the lower-right. A bright star with a four-pointed flare is visible in the upper-left.

Start with Strategy, Not Just Technology

- Business capability mapping
- Modernization goals
 - ◉ Agility, UX, cost
- Prioritization of capabilities
- Domain-Driven Design (DDD)
 - ◉ Ubiquitous Language
 - ◉ Domain Modeling
 - ◉ Entities /Relationships/Behaviors



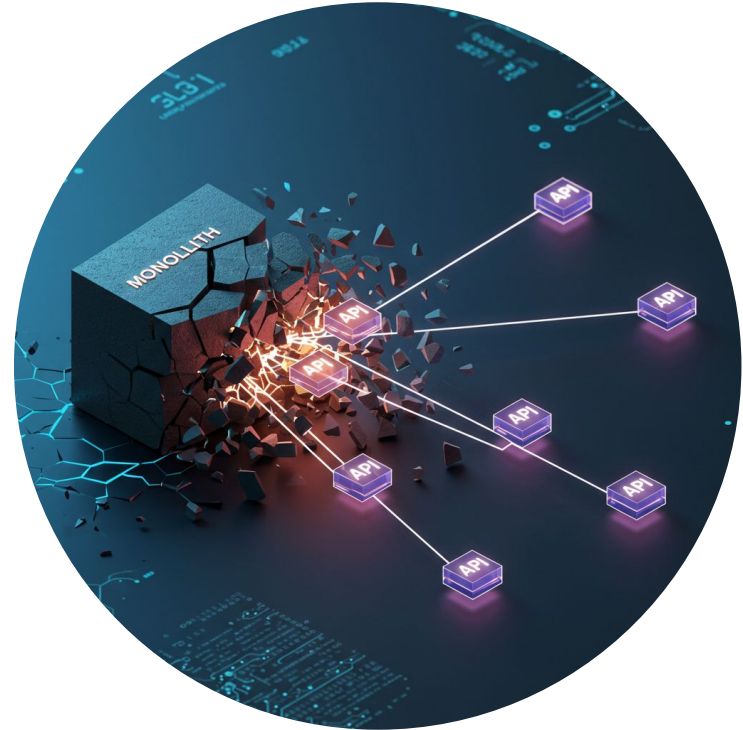
Design API Contracts

- Contract-First Approach
 - Right API Style
 - Focus on consumers
 - Entities/Errors/reusability
- Mocking, Validation
- Stakeholder feedback & iteration
- Collaboration



Implement Modernization Patterns

- Microservices decomposition
- Strangler Fig pattern
- Anti-Corruption Layer (ACL)



Prioritize Developer Experience

- Discoverability
- Documentation
 - Self descriptive
 - Interactive
- SDKs, code samples
- Support and Community
- Theming/Personalization



Building Trust with API Governance

- Standards and Compliance
 - Specifications(OAS)
 - Industry Standards and best practices(OWASP 10)
 - Domain specific standards(FHIR)
- Automated API Governance and Surveillance
- Shift-Left Compliance



Analytics And Monitoring

- Value of Analytics in Modernization
 - Measure ROI with data
 - Validate modernization goals
- Actionable Insights Through Monitoring
 - Usage & Performance
 - Business Impact
 - Trend Analysis
 - Developer Insights
- Data-Informed API Lifecycle

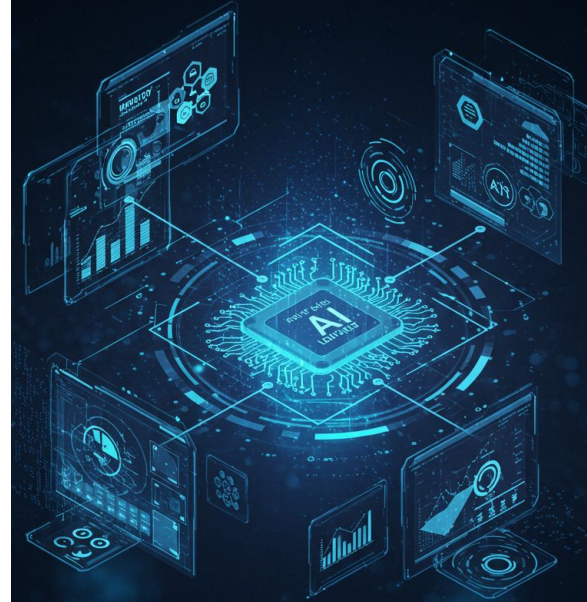


Future-Proofing with API-First



Future-Oriented Perspectives

- Embracing Change, Not Just Predicting It
- APIs and Emerging Technologies
 - AI/IOT/Blockchain
- The API Economy
 - Platform Business Models
 - Partnerships and Ecosystems



AI for API-First: Enhancing the Process

- AI-Assisted API Design
- AI-Driven API Discovery & Recommendations
- AI-Driven SDK generation for API Products
- AI-Assisted Documentation generation
- AI based Mocking
- AI-Powered API Governance
- AI for API Development



**The future belongs to those who see
possibilities before they become
obvious.**

- John Scully -



Question Time!



The background is a dark, deep blue space filled with a vibrant, multi-colored nebula or galaxy. The nebula's colors range from deep reds and oranges to bright yellows and blues, creating a sense of depth and movement. Scattered throughout the scene are numerous 3D geometric shapes, primarily cubes and rectangular prisms, in various sizes and orientations. These shapes are rendered with a blue-to-red gradient, giving them a three-dimensional appearance. Some shapes have small, glowing square or triangular features on their faces. The overall composition is dynamic and futuristic.

Thank you!

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