

devon

AIMMS 



AI-Powered Test Automation for AIMMS Cloud Platform

A DevOn Solution Delivering 70% Productivity Gains

Case study

Executive Summary

AIMMS Cloud Platform faced critical bottlenecks: a small QA team, minimal test automation, and limited Playwright expertise. DevOn deployed a multi-agent AI test generation system that reduced test writing effort by 70%, accelerated delivery by 3×, and democratized automation across the team.

Key Results:

- 70% reduction in test writing effort
- 3× faster test suite development
- 100% AI-generated initial code with 30% human review & refinement



The Challenges

AIMMS Cloud Platform Context

AIMMS delivers cloud-based optimization and analytics software to enterprises. As the platform expanded, the QA team struggled to maintain pace.

Critical Constraints



Capacity Bottleneck

- Small QA team supporting rapidly expanding platform
- Manual testing consuming ~80% of available bandwidth
- Test creation unable to match development velocity
- Growing backlog of untested features



Technical Knowledge Gap

- Limited Playwright framework expertise
- Steep learning curve preventing test development
- Heavy dependency on few automation experts



Business Impact

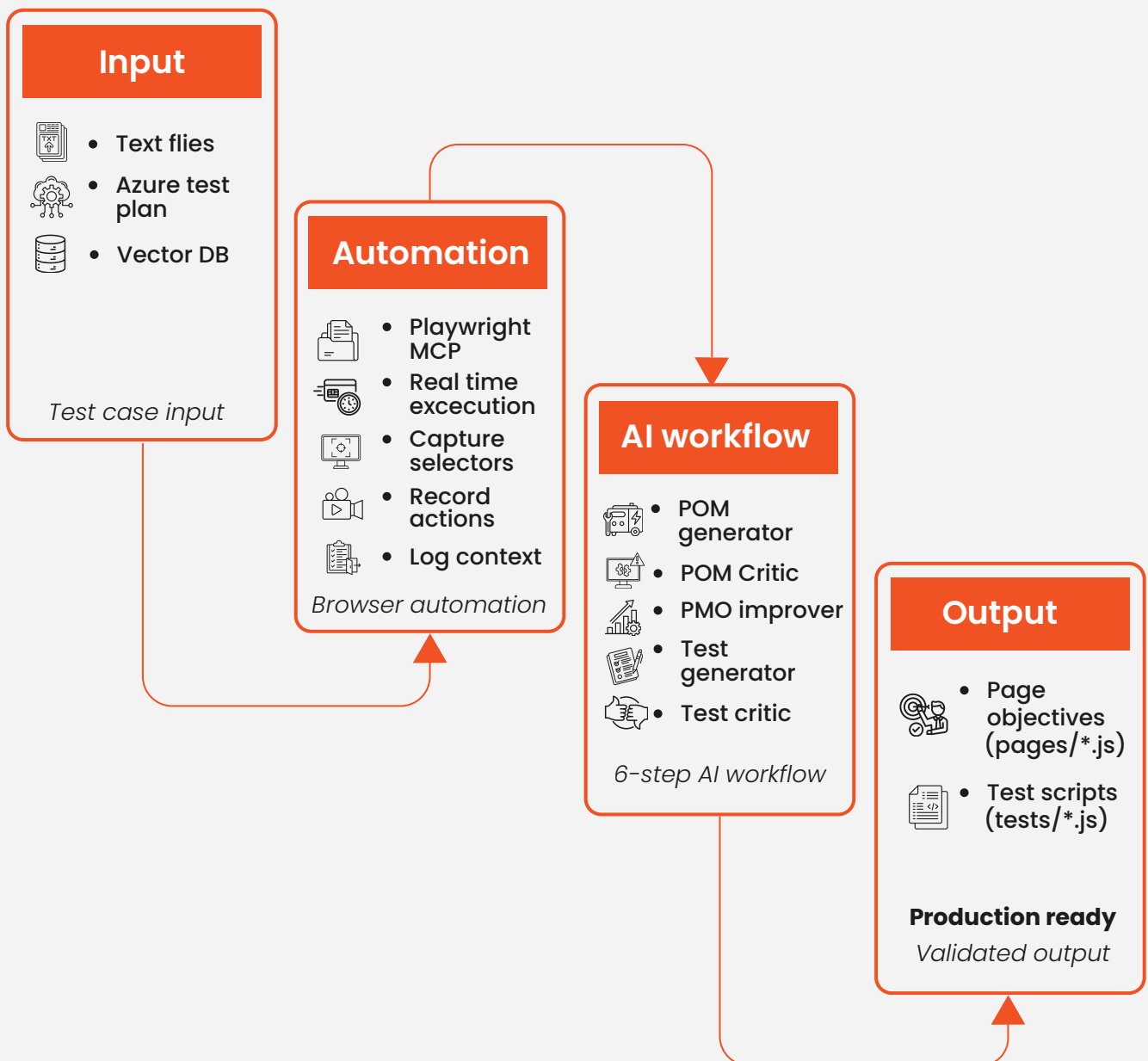
- Quality impacted feature releases
- Risk of reduced coverage under deadline pressure
- High dependency on Manual testing with few professionals

The DevOn Solution

Multi-Agent AI Architecture

DevOn implemented an autonomous test generation system powered by multi-agent AI, transforming how AIMMS approaches quality assurance.

Architecture overview



How It Works

> Test case input and validation

- Accepts test cases from multiple sources (text files, Azure Test Plan test cases, vector DB)
- Validates structure: ID, title, steps, expected results

> Browser automation execution with MCP playwright

- Executes test steps in Browser
- Captures accurate selectors performing real user interactions
- Records page states and verification points
- Generates optimized execution log for AI processing

> 6-Step AI workflow

Page Object Cycle:

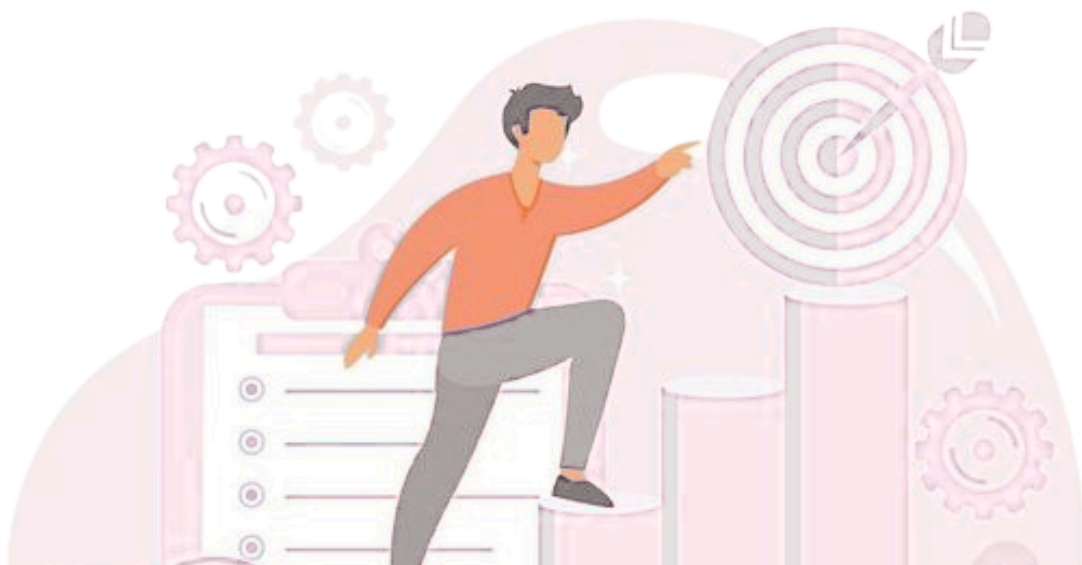
- Generator: Creates POMs from browser execution log
- Critic: Reviews structure, validates URL boundaries
- Improver: Refines based on critique feedback

Test Script Cycle:

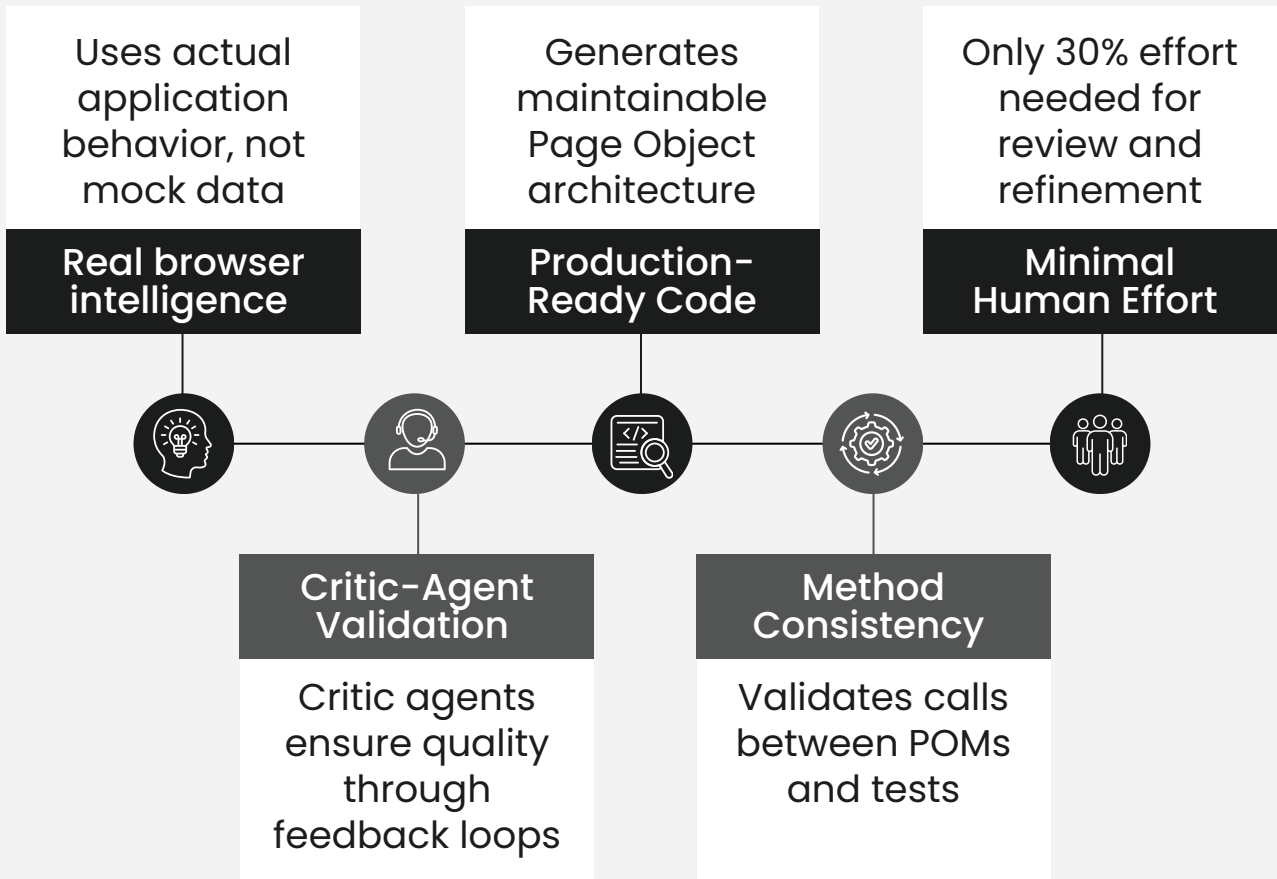
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> Production Output

- Page Object files with reusable components
- Test scripts with proper assertions
- Method-validated and framework-compliant
- Ready for CI/CD integration

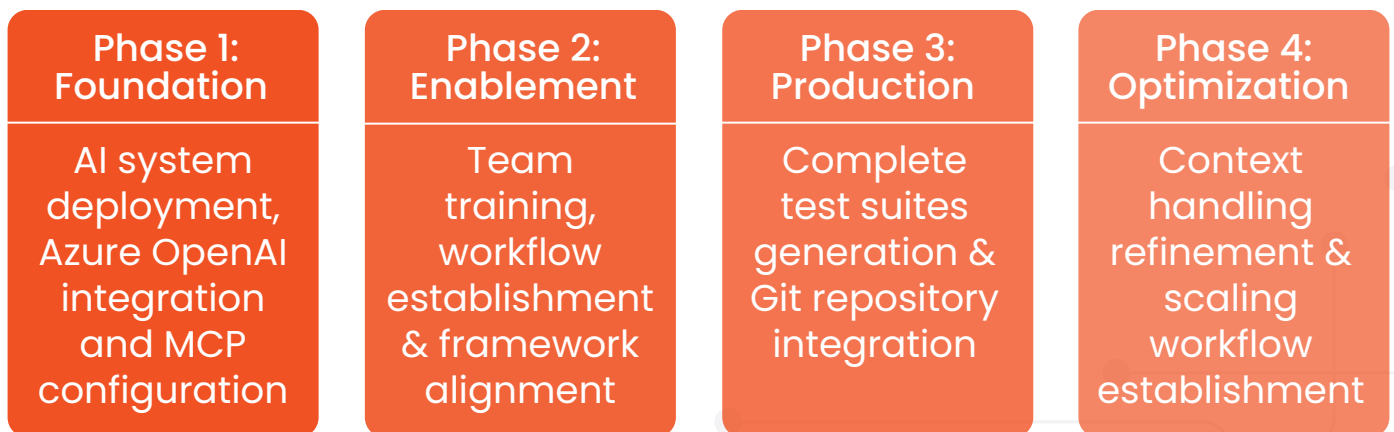


Key Differentiators



Implementation & Results

Deployment Timeline



Measurable Impact

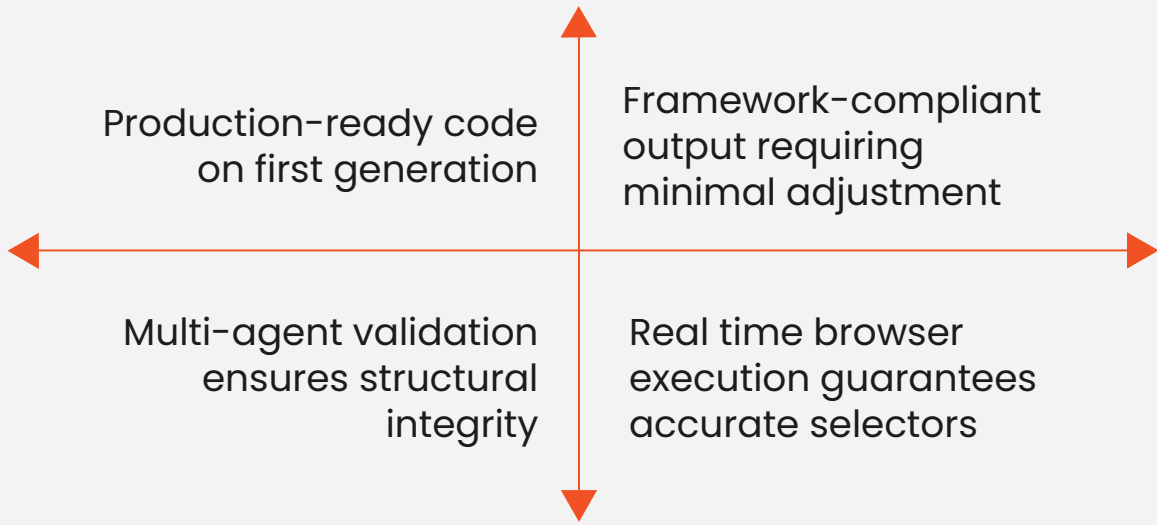
Productivity Transformation

Metric	Previous state	Current state	Improvement
Engineering effort	100% Manual	30% oversight	70% reduction
Code Generation	Manual Implementation	AI-Generated	100% AI leverage
Locator/selector creation	100% manual identification	20% manual correction	80% AI-generated locators
Playwright expertise	High (Medior to expert level)	Low (team-wide)	60% democratization of testing

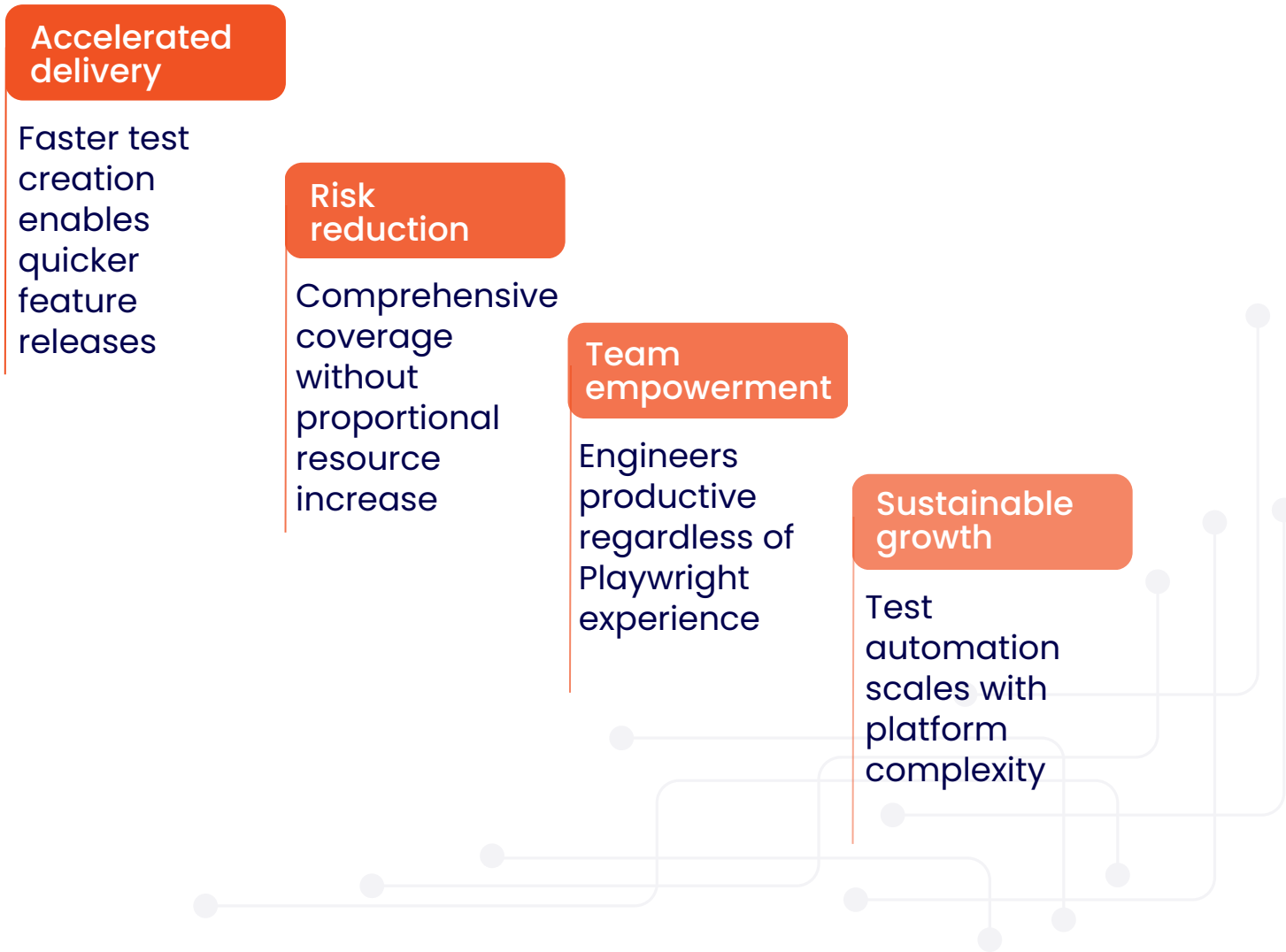
Operational Benefits

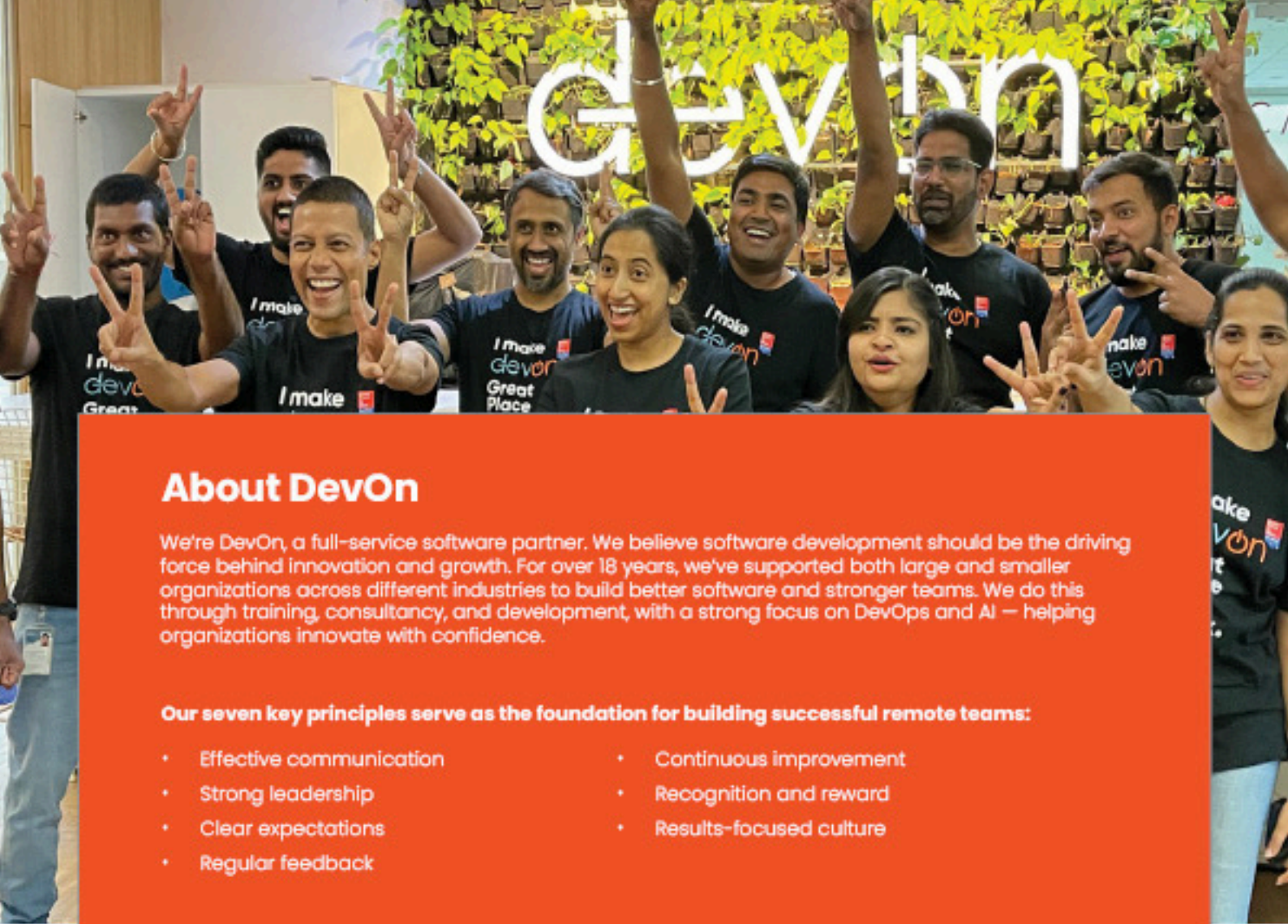
- Team members with limited Playwright knowledge generate tests independently
- Reduced onboarding time for Test automation from months to weeks
- More comprehensive test coverage without professionals increase
- Consistent quality across all generated test suites
- Sustainable scaling as platform complexity grows

Technical Excellence



Strategic value for Client





About DevOn

We're DevOn, a full-service software partner. We believe software development should be the driving force behind innovation and growth. For over 18 years, we've supported both large and smaller organizations across different industries to build better software and stronger teams. We do this through training, consultancy, and development, with a strong focus on DevOps and AI – helping organizations innovate with confidence.

Our seven key principles serve as the foundation for building successful remote teams:

- Effective communication
- Strong leadership
- Clear expectations
- Regular feedback
- Continuous improvement
- Recognition and reward
- Results-focused culture

DevOn is proud of our industry awards, and they reflect the high regard of DevOn shared by clients, employees, and analysts.

Awards & Recognition



4 Times Great Place to Work Certified

Certification based on Trust Index 94% – a comprehensive employee survey and culture audit



Top 10 inspiring Workplaces 2023

Ranked No.4



Top 50 mid size workplaces in India



India's Best Workplaces for Millennials™ 2023



National Best Employer Brands Award 2022



CONTACT US

Speak with one of our experts

Our insights can help you take advantage of change. If you're looking for fresh ideas to address your challenges, please feel free to reach out to us for a quick brainstorm.

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