

9ème édition de la

Soirée du Test
Logiciel

Sophia -
Antipolis



15 septembre 2026

17h à 23h



ETSI, Valbonne



Soirée du
test logiciel



Sophia Antipolis

From Keywords to Agents

The Next Evolution of Test Automation



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Agenda



Foundation of Keyword-Driven Testing

Keyword-driven testing enables readable, reusable, and business-aligned automation through abstraction layers.



Challenges of Scaling Automation

Large keyword catalogs cause navigation difficulties and require strict governance to maintain consistency.



Transition to Agent-Assisted Ecosystems

AI agents enhance discoverability, reuse, and validation, adding intelligence and agility to test automation.



Why Keyword-Based Automation ?



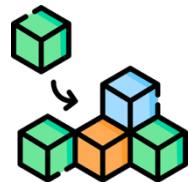
Improved Readability

Keyword-driven testing uses **business language**, enabling collaboration between **technical and non-technical** team members.



Reusable Test Components

Reusable keywords **reduce duplication**, encourage **standardization** across testing projects.



Modular Test Design

Separates test logic from implementation, easing adaptation to system changes without full rewrites.



Technology Abstraction

Unify testing across various technologies like REST APIs, SOAP, .. UI flows via technology abstraction.



UTOPY: Our Keyword Driven framework



Keyword-Driven Automation

UTOPY (Unified Test Automation in Python) is a framework developed at Amadeus based on standards from the market that provides Business Keywords Libraries.



Technology Abstraction

Supports consistent testing across various systems like REST APIs, Soap XML or UI components.



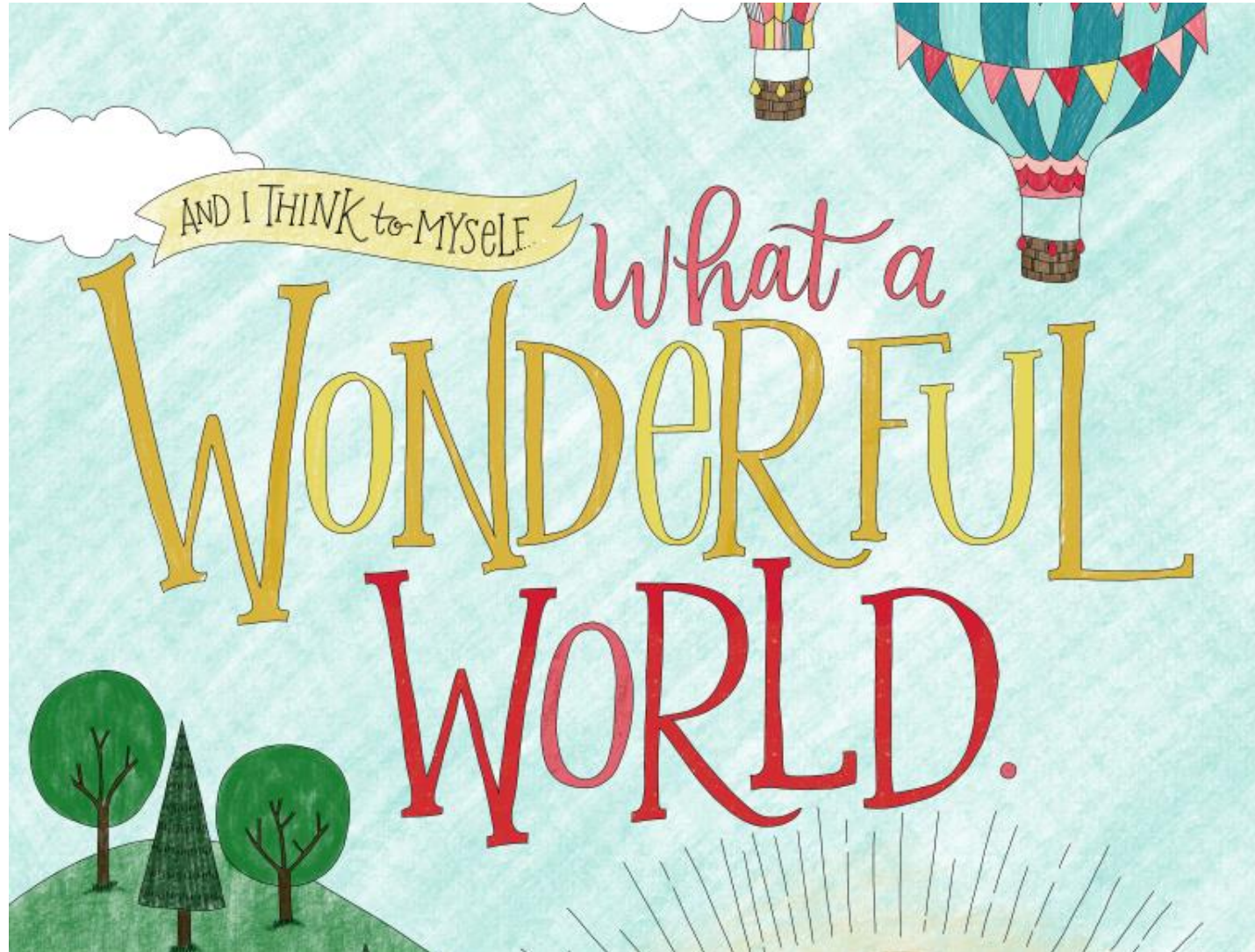
Governance

Strict governance ensures quality and maintainability while libraries remain Python-based and framework independent.



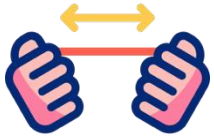
Community-Driven Model

Champions support best practices enabling scalable automation in collaboration with central teams.





Keyword Driven Approach Challenges



Limited Flexibility

Automation is constrained by existing keywords.



Discoverability

Growing keyword libraries cause difficulties in locating and reusing assets, leading to duplication and errors.



Governance and Oversight

Maintaining naming conventions and documentation requires continuous human review and pull request management.

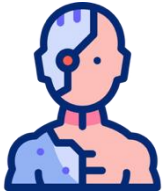


Adaptation to Change

Keyword-driven frameworks require manual intervention whenever new functionality is introduced.



From Scripts to Intelligent Agents



Evolution of Automation

From fragile scripts to reusable keyword-driven frameworks enhancing maintainability and abstraction.



Framework Advancements

Advanced frameworks promote protocol abstraction and cross-system testing using unified functional keywords.



Rise of Intelligent Agents

AI-driven agents interpret test intent, generate automation artifacts, and apply validation rules autonomously.



The rise of Intelligent Agents



Intelligent Test Automation

AI agents add intelligence and context-awareness to traditional test automation frameworks.



Framework Enhancement

Agents enhance frameworks by leveraging keyword libraries and proposing optimal test combinations.



Governance and Validation

Agents enforce governance by validating outputs against standards before submission.



Accelerated Test Development

AI agents accelerate test creation by generating new keywords and reducing duplication.



Practical Applications of AI in Testing

Keyword Discovery



Test Scenario Automation

AI assists in generating complete test scenarios within frameworks to accelerate test suite creation.



Governance and Onboarding Support

Agents automate review processes for compliance and help onboard new team members by explaining libraries and best practices.



Layered Agent-Based Testing Architecture



Intent Layer

The intent layer defines testing objectives using user stories, API specs, or workflow descriptions.



Agent Orchestration

This layer interprets intent and sequences actions to fulfill testing goals effectively.



Skills and Context Layer

Includes knowledge bases like libraries, keyword catalogs, templates, and governance rules for agent tasks.



Execution and Governance

Execution runs tests via frameworks and CI/CD; governance validates outputs with human oversight.

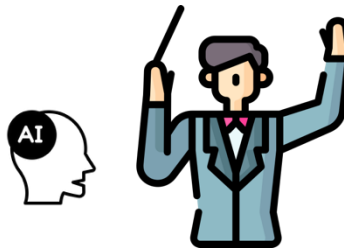


Orchestrating Agents



Discovery Agent

Searches existing keywords
Compares similar capabilities
Suggests reuse or update



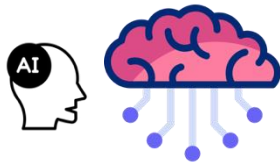
Orchestrator Agent

Captures user intent
Decides reuse / update / create
Selects the right specialist agent



Documentation Agent

Generates inline documentation
Updates keyword docs
Validates documentation quality



Generation Agents



REST Keyword
Generator Agent



SOAP Keyword
Generator Agent



UI Keyword
Generator Agent



...



Validation Agent

Checks compliance
Runs structural checks
Classifies issues



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Conférence

Ensuring Safe AI Adoption



Managing Uncontrolled Generation

AI outputs must be treated as drafts requiring human validation to prevent errors and inconsistencies.



Implementing Governance Mechanisms

Governance includes pull request checks, documentation, and naming conventions to ensure compliance.



Ensuring Data Privacy & Security

Protecting confidential information is critical when AI processes sensitive data.



Measuring AI Adoption Effectiveness

Define metrics like reduced duplication, better onboarding, and improved review accuracy.



Lessons Learned



Evolution of Testing Practices

Keyword-driven testing is evolving with AI agents enhancing automation without replacing foundational methods.



Strengths and Limitations

Keyword-driven testing offers readability and reuse but requires intelligent solutions for scaling effectively.



AI-Enhanced Automation

AI agents improve discoverability, automate repetitive tasks, and support governance in testing frameworks.



Strategic Integration

Successful AI adoption requires strong foundations, clear standards, and gradual integration with human oversight.

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SCAN ME



**Merci de
votre écoute !**

Votre avis nous intéresse