

TURKEY SOFTWARE QUALITY REPORT

2026–2027

20
27



Executive Summary

Key findings and recommendations from the 2026–2027 survey

Executive Summary.

The testing community has moved past asking what an AI agent is and is already using agents in practice, but its instincts on safety limits, simplicity and cost control lag behind its enthusiasm.

Main Findings.

01

Agents are already part of testing work.

43.9% of respondents use single-agent testing and 36.8% multi-agent testing, alongside manual testing and test automation (80.7% each).

02

The definition of an agent is settled.

93% say an agent is something that takes actions and uses the results to decide what to do next. Nobody chose "a bigger or newer model".

03

Testers trust automatic checks most.

77.2% would catch an agent's mistakes with tests, schemas or checkers whose failures feed back to the agent. Only 42.1% would put a human review before output goes out.

04

Human approval is expected for actions that are hard to undo.

Deleting files and making payments (89.5% each) and emailing a customer (87.7%) top the list. Read-only actions draw under 20%.

05

Simplicity and cost control are the weak spots.

Only about half picked the simplest working design, and fewer than half would cap an agent's steps (40.4%) or spend (42.1%).



Executive Summary

Key findings and recommendations from the 2026–2027 survey

Where practice stands today ■

Testing teams run a hybrid model: manual testing and test automation are each used by 80.7% of respondents, and agent-powered testing is already in the mix (single-agent 43.9%, multi-agent 36.8%). No one answered "Not sure", so respondents know how their own teams test.

Familiarity with agent vocabulary is broad but uneven. 91% have met at least one of the listed terms. Terms about building agents (tool calling, orchestrators) are better known than terms about keeping them safe and correct (guardrails, reflection).

The gap matters for this year's theme: reliability and trustworthiness depend on exactly the concepts that fewer than half of respondents recognise.



Executive Summary

Key findings and recommendations from the 2026–2027 survey

Implications and recommendations.

The community is ready to move from "what are agents" to "how do we run them safely"; next year's content should follow that shift.



1. Teach guardrails and reflection as core skills.

These are the least familiar terms (47.4% and 40.4%) yet central to reliable, trustworthy agents.



2. Promote "start simple" design.

Show worked cases where one agent with a basic loop and a small tool set beats plans, extra agents and long tool lists.



3. Make budgets a default.

Pair loop detection with step and spend caps in reference designs and checklists.



4. Set a zero-tolerance rule on fabricated answers.

A failed tool call should be retried or reported, never covered up.



5. Position testers as the orchestration layer.

Testing teams are well placed to orchestrate the agents against to each other and to the guardrails.



Koray Yitmen

President, Turkish Testing Board
Thought Leader



LINKEDIN
[@korayyitmen](#)





Survey Questions

11 questions · How testing professionals understand, design and govern AI agents

01

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Which of these terms have you come across before?

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02

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What makes something an "agent" rather than a normal chatbot?

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Your agent is asked a question it can't answer from memory. It has a search tool. What's the simplest structure that gets this working?

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Your agent produces a draft that has mistakes in it. Which of these would help catch them?

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You give your agent 60 different tools and it starts picking the wrong ones. What's likely to help most?

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Your agent gets stuck in a loop and keeps repeating the same action. What would you add?

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Survey Questions

11 questions · How testing professionals understand, design and govern AI agents

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A tool call fails — the API is down. What should a well-designed agent do?

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Which of these should a human approve before the agent does it?

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If you do split the task into two agents, what should pass between them?

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On long tasks, your agent seems to "forget" what it did earlier, which fixes make sense?

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11

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How do you conduct your testing?

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01

QUESTION 1

Which of these terms have you come across before?

Multiple answers allowed · Share of respondents (%)

61.4%

Tool calling — the agent can run functions you give it, like a search or a calculator



61.4%

Orchestrator — one agent that hands out jobs to other agents



54.4%

ReAct — the agent thinks, does something, looks at the result, repeats



52.6%

Context window — how much text the model can hold in mind at once



47.4%

Guardrails — limits that stop an agent doing something harmful or expensive



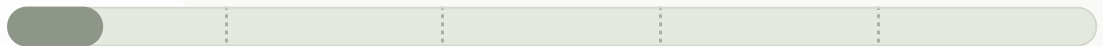
40.4%

Reflection — the agent checks its own work and fixes it



8.8%

None of these yet



0 20 40 60 80 100

61.4%

KEY INSIGHT

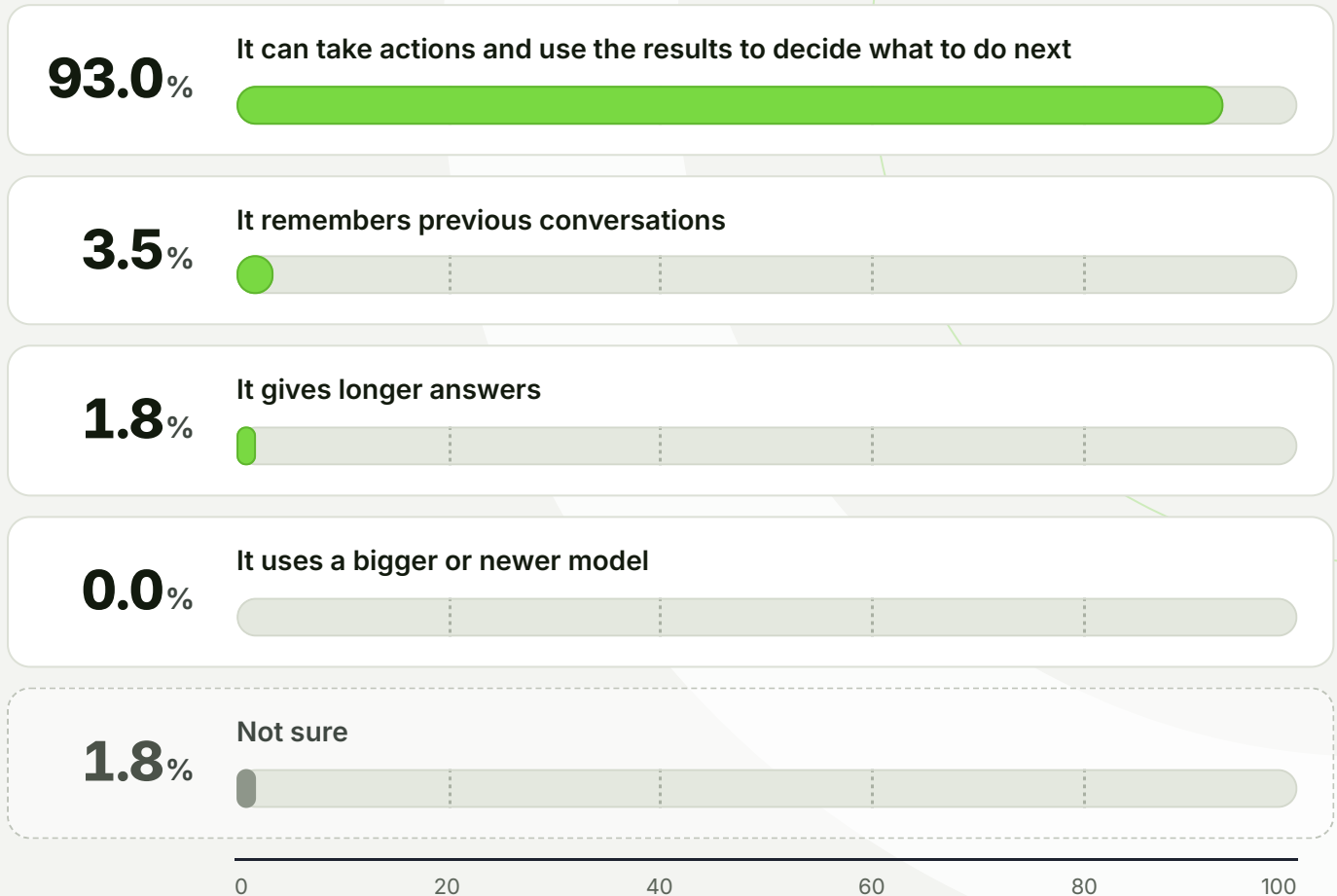
Tool calling and Orchestrator are the most familiar terms — recognised by six in ten respondents.

02

QUESTION 2

What makes something an "agent" rather than a normal chatbot?

Single answer · Share of respondents (%)



93.0%

KEY INSIGHT

Near-universal agreement: **taking actions and acting on the results** is what turns a chatbot into an agent.

03

QUESTION 3

Your agent is asked a question it can't answer from memory. It has a search tool. What's the simplest structure that gets this working?

Single answer · Share of respondents (%)

54.4%

Let it decide it needs to search, search, read the result, then answer



15.8%

Make it write out a full plan first, then follow the plan



12.3%

Always search before every answer, no decision involved



10.5%

Have it search three different ways and compare



7.0%

Not sure



0 20 40 60 80 100

54.4%

KEY INSIGHT

More than half pick the **decide → search → read → answer** loop as the simplest structure that works.

04

QUESTION 4

Your agent produces a draft that has mistakes in it. Which of these would help catch them?

Multiple answers allowed · Share of respondents (%)

77.2%

Run an automatic check (tests, a schema, a spellchecker) and feed failures back



52.6%

Ask the agent to review its own draft against a checklist and revise



52.6%

Use a second agent whose only job is to critique



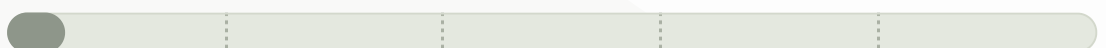
42.1%

Show it to a human before anything is sent



5.3%

Not sure



0 20 40 60 80 100

77.2%

KEY INSIGHT

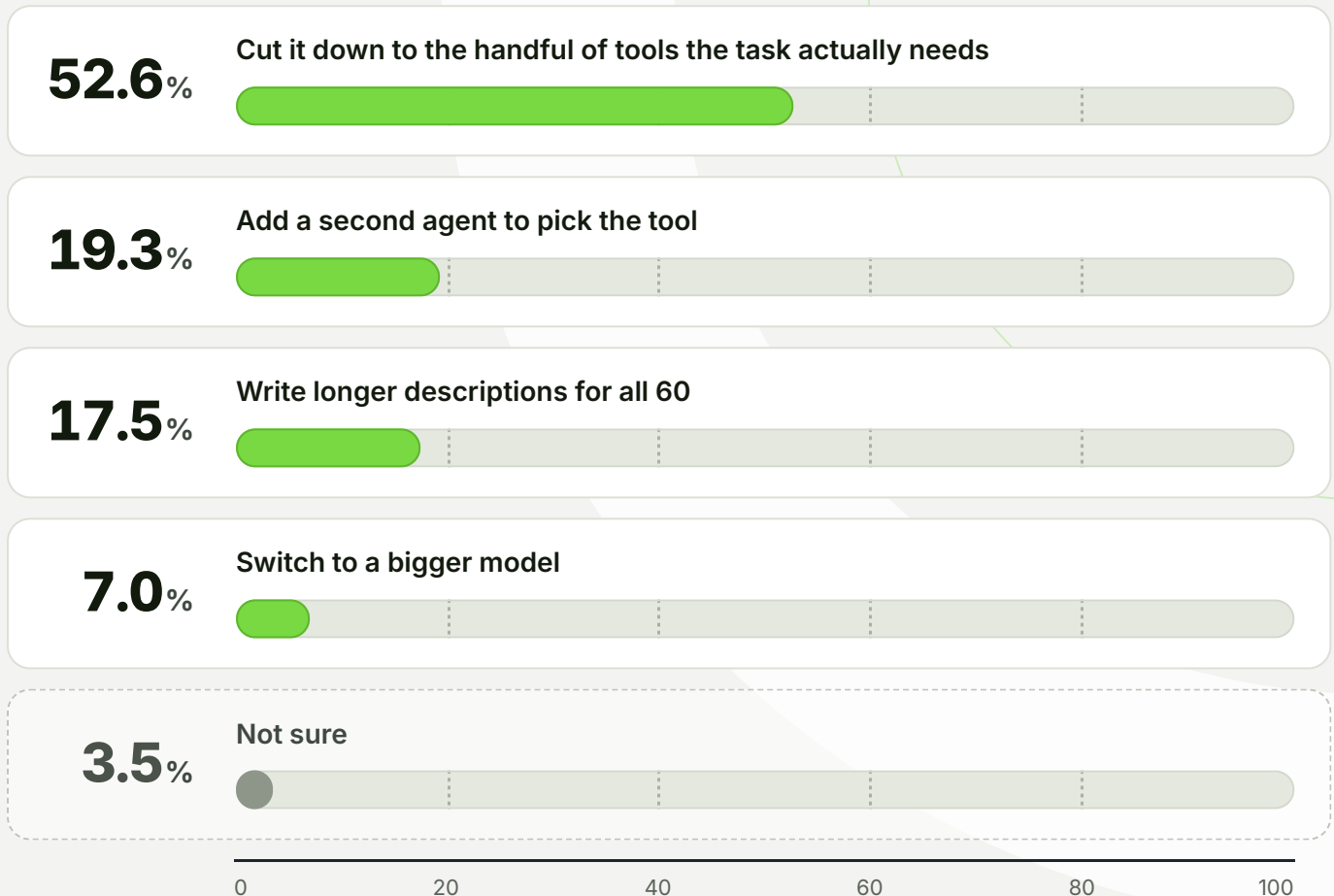
Automatic checks — tests, schemas, spellcheckers — are the most trusted way to catch an agent's mistakes.

05

QUESTION 5

You give your agent 60 different tools and it starts picking the wrong ones. What's likely to help most?

Single answer · Share of respondents (%)



52.6%

KEY INSIGHT

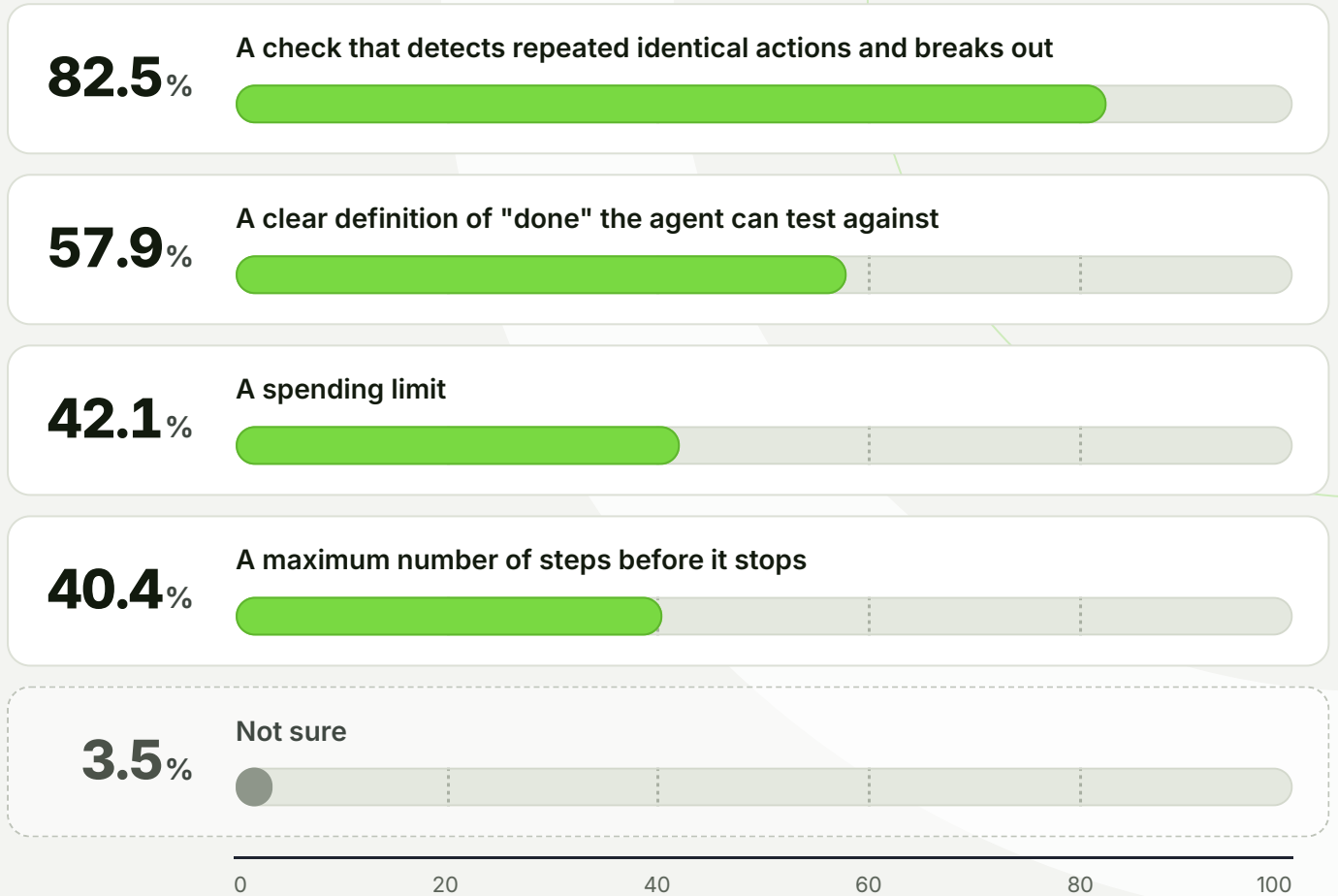
Most would **trim the toolset** to what the task needs rather than add a bigger model or another agent.

06

QUESTION 6

Your agent gets stuck in a loop and keeps repeating the same action. What would you add?

Multiple answers allowed · Share of respondents (%)



82.5%

KEY INSIGHT

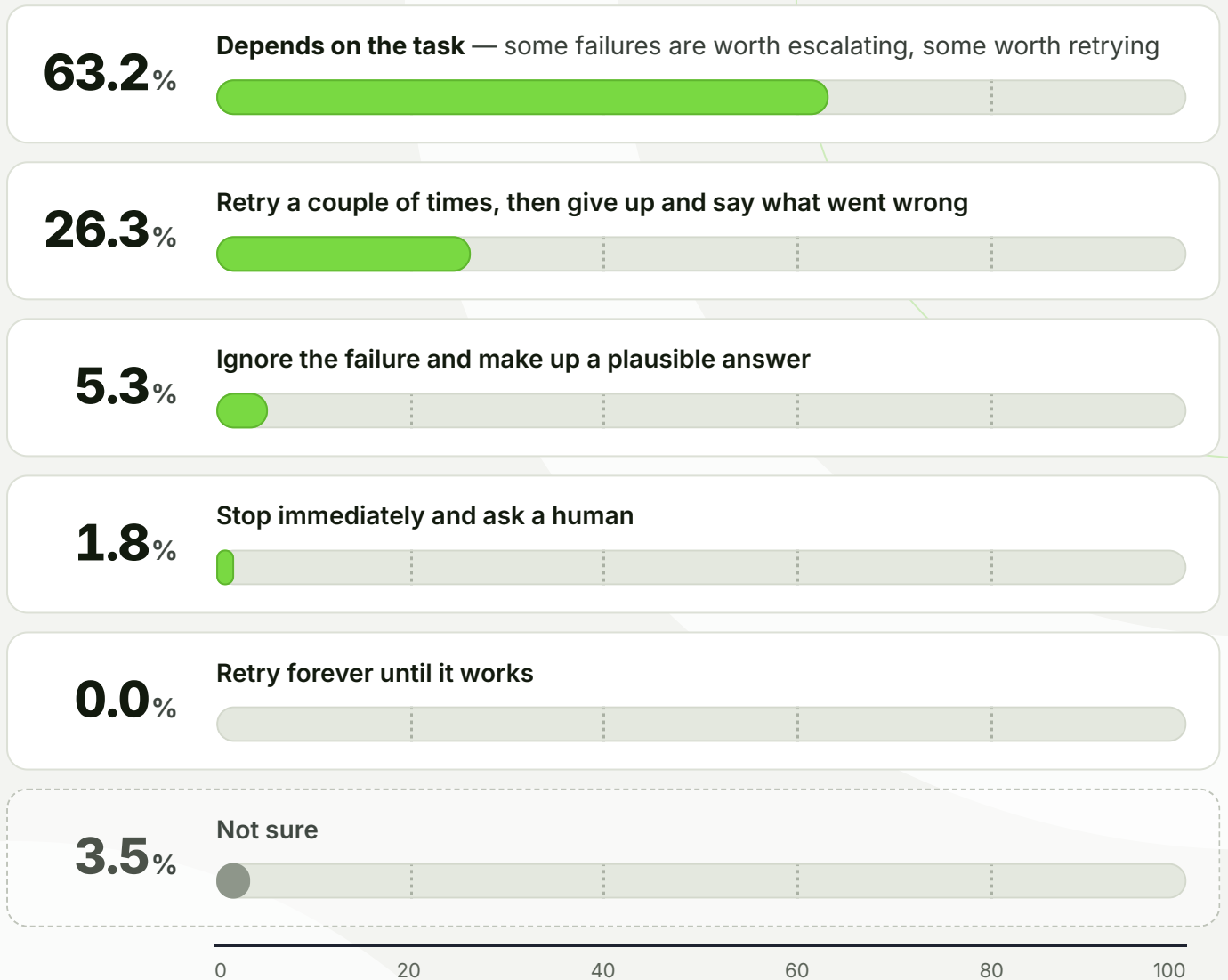
Detecting repeated identical actions is the clear favourite fix for an agent stuck in a loop.

07

QUESTION 7

A tool call fails — the API is down. What should a well-designed agent do?

Single answer · Share of respondents (%)



63.2%

KEY INSIGHT

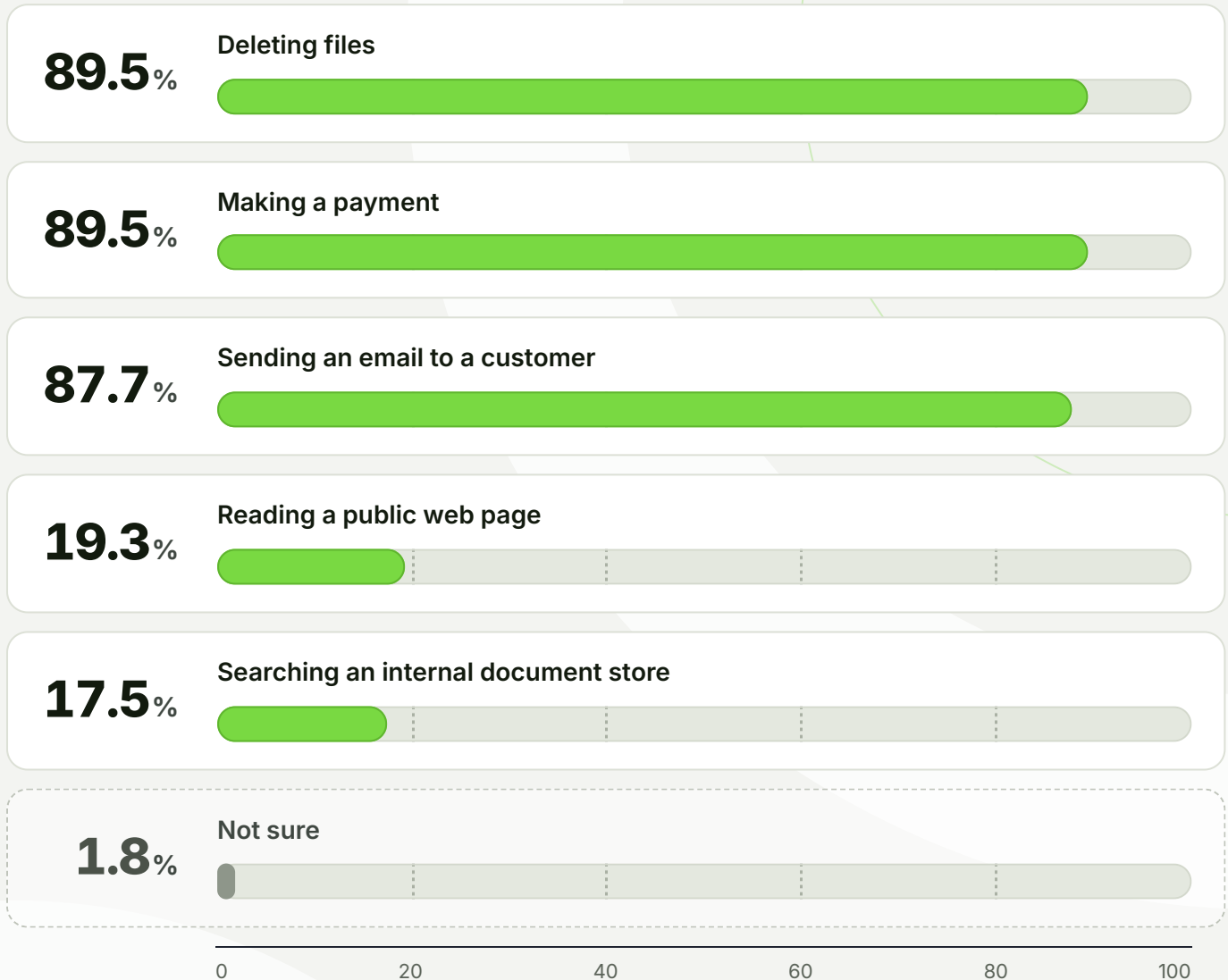
Respondents favour **context-dependent handling** over a fixed rule — and nobody chose to retry forever.

08

QUESTION 8

Which of these should a human approve before the agent does it?

Multiple answers allowed · Share of respondents (%)

**89.5%**

KEY INSIGHT

Deleting files, making payments and emailing customers are seen as actions that need a human sign-off.

09

QUESTION 9

If you do split the task into two agents, what should pass between them?

Single answer · Share of respondents (%)

**75.4%**

KEY INSIGHT

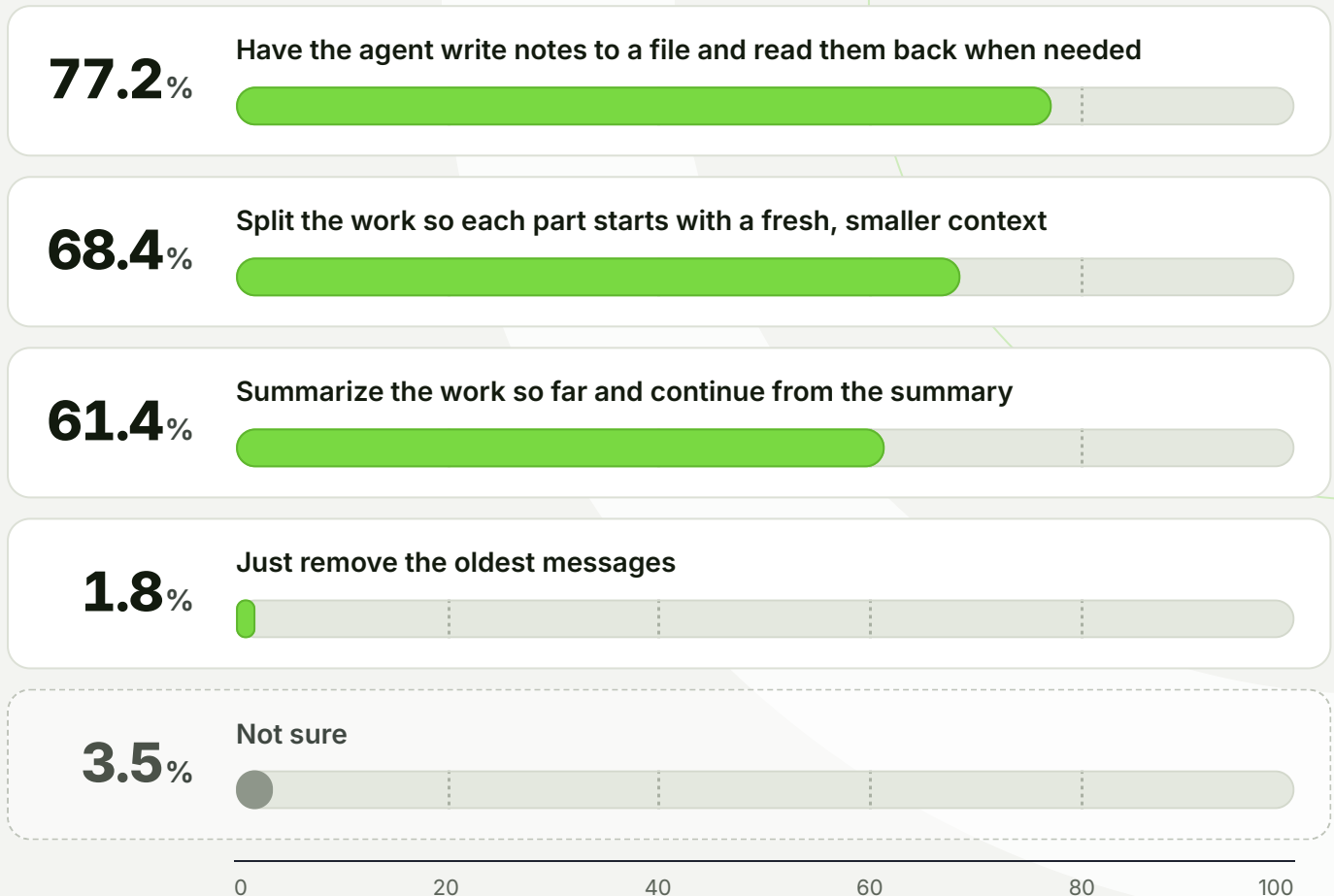
Three in four say agents should hand over a **short, structured summary** — not the whole conversation.

10

QUESTION 10

On long tasks, your agent seems to "forget" what it did earlier, which fixes make sense?

Multiple answers allowed · Share of respondents (%)



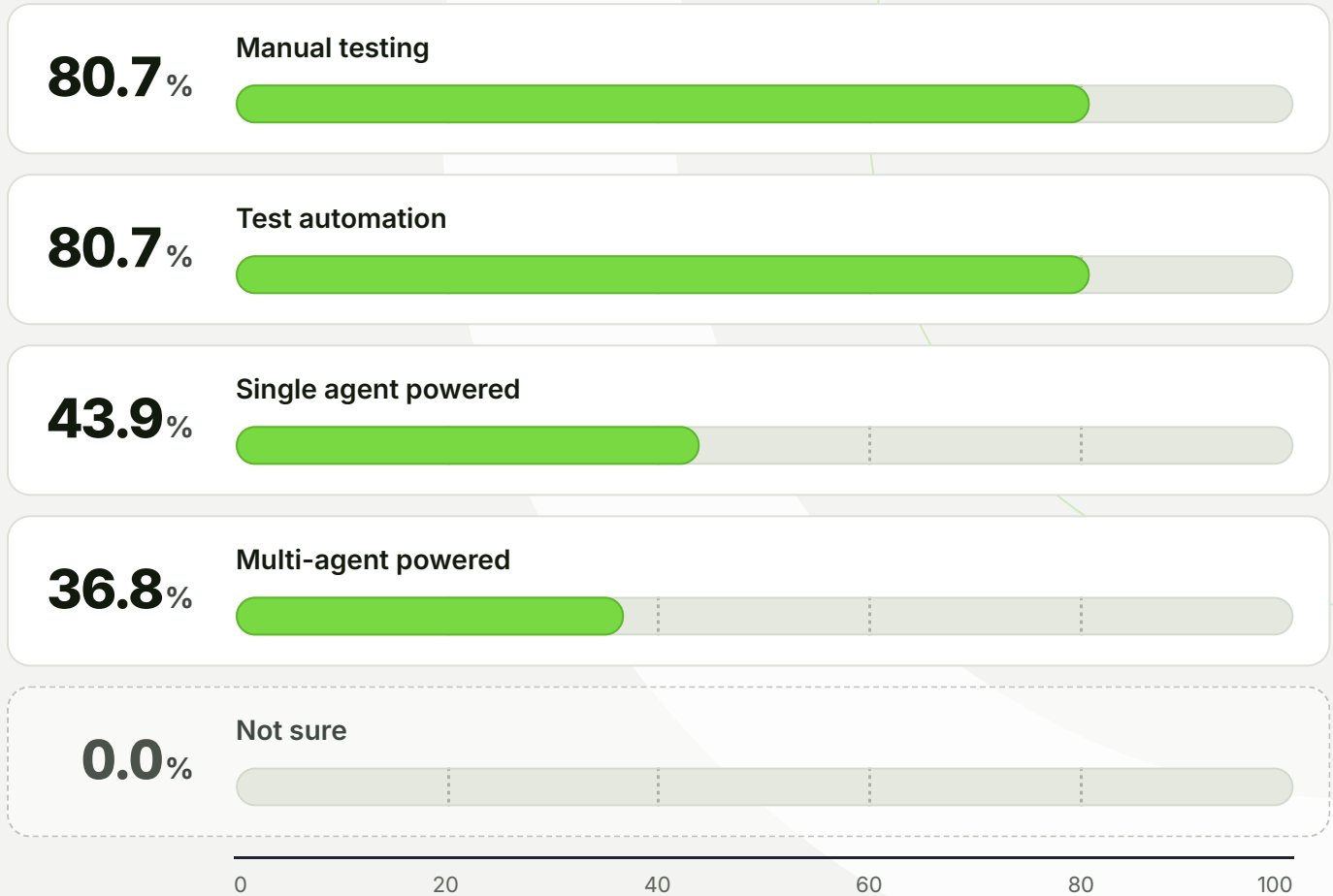
77.2%

KEY INSIGHT

Writing notes to a file is the leading fix for agents that lose track on long tasks.

How do you conduct your testing?

Multiple answers allowed · Share of respondents (%)



80.7%

KEY INSIGHT

Manual testing and test automation still lead, while single-agent powered testing already reaches 43.9%.



ABOUT

ISTQB®

International Software Testing Qualifications Board



WHO WE ARE

ISTQB® is a global, non-profit organization responsible for enabling test professionals, through globally accepted software testing certification standards to support their career development. As of May 2025, ISTQB® has administered 1.5 million exams and issued more than 1.1 million certifications in over 130 countries. The scheme relies on a Body of Knowledge (Syllabus and Glossary) and exam rules that are applied consistently all over the world, with exams and supporting material being available in many languages. With its extensive network of Accredited Training Providers, Member Boards, and Exam Providers, ISTQB® is one of the biggest and most established vendor-neutral professional certification schemes in the world. ISTQB® terminology is industry recognized as the de facto language in the field of software testing and connects professionals worldwide.



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ABOUT

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Increasing software testing awareness since 2006



WHO WE ARE

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Translation Projects

24 documents translated into Turkish

The translation group within the board works on the translation of ISTQB® documents and exams in order to bring international software testing terminology to Türkiye. Documents translated so far are as follows:



ISTQB® Syllabi

7 documents

- ISTQB® Certified Tester Foundation Level Syllabus 2011
- ISTQB® Certified Tester Foundation Level Syllabus v4.0 (2024)
- ISTQB® Certified Tester Advanced Level Test Analyst Syllabus v4.0
- ISTQB® Certified Tester AI Testing Syllabus 2021
- ISTQB® Certified Tester Foundation Level Syllabus 2018
- ISTQB® Certified Tester Advanced Level Test Analyst Syllabus 2012
- ISTQB® Certified Tester Automotive Software Tester Syllabus 2018



Exams, Glossary & Books

8 documents

- ISTQB® Software Testing Glossary
- ISTQB® Certified Tester Foundation Level (CTFL) v4.0 Sample Exam B
- ISTQB® Certified Tester Foundation Level (CTFL) v4.0 Sample Exam D
- ISTQB® Certified Tester AI Testing Sample Exam
- ISTQB® Certified Tester Foundation Level (CTFL) v4.0 Sample Exam A
- ISTQB® Certified Tester Foundation Level (CTFL) v4.0 Sample Exam C
- ISTQB® Certified Tester AI Testing Exam
- Dragons Out - A Dragon Lesson of Software Testing (Bir Ejderhadan Yazılım Test Dersi)



TMMi®

9 documents

- TMMi® General Brochure
- TMMi® Lightning Scan Tool
- TMMi® Career Path Brochure
- TMMi® Professional Sample Exam Paper A
- Testing AI-Systems and TMMi®
- TMMi® in the Agile World (Çevik Bir Dünyada TMMi)
- TMMi® Professional Certification Brochure
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- TMMi® in the DevOps World



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110+

KEYNOTES



7,700+

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COUNTRIES



200+

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In the last seventeen TestIstanbul conferences

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The board organizes sector or topic-based panels for the development of the software testing industry. More than 1,300 professionals have attended the events. The panels organized so far and the panel series that will be organized in the coming period: Test Finance, TestInsurance, TestAnkara, Testİzmir, TestGames, TestFinTech, TestDefence, TestRemote, and Product Management and Product Quality Powered by AI and Agents in Defence Industry.

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TestIstanbul Returns for Its 18th Edition on October 7–8, 2027



The 18th International TestIstanbul Conference takes place online on **October 7–8, 2027**, under the theme **“BEYOND TESTING — Engineering Trust in the Age of AI,”** with a focus on **Evals, Guardrails, Gray-Box Testing, Metamorphic Testing, Autonomous Agents, and Tester in the Loop.** What evidence do we need before we can trust an AI system? Where should human judgment come in? These questions sit at the heart of this year’s theme, inviting testers to explore how their skills can help build confidence in AI and shape its use. Organized by the **Turkish Testing Board**, TestIstanbul brings the testing community together to look ahead, question assumptions, and explore the next chapter of the profession. **Join us for the 18th edition.**

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2026-2027

TURKEY SOFTWARE QUALITY REPORT

2026-2027



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