



SmartSPI: innovation decisions based on trusted AI info

Research evidence × three GenAI models
× expert review



Who created the concept?



- Innovation Agent Working Group of the ASA
 - <https://automotive-skills-alliance.eu/about-us/#WorkingGroups>
- Part of the EuroSPI/ASA Certified ISO 560xx Innovation Agent and Assessor Training and Certificate
 - ISO 56006 MOOC: <https://learn.skills-hub.eu/enrol/index.php?id=126>
 - ISO 56007 MOOC: <https://learn.skills-hub.eu/enrol/index.php?id=219>
 - Full Training in EuroSPI Academy, contact info@eurospi.net

Background

Supported by EU Project TRIREME

Innovation management system **Capability Assessment Model** , contains

SIM (Strategic Intelligence Management), related to ISO 56006, with the processes

SIM.1 Strategic Intelligence Management Setup

SIM.2 Strategic Intelligence Cycle

SIM.3 Intelligence Communication

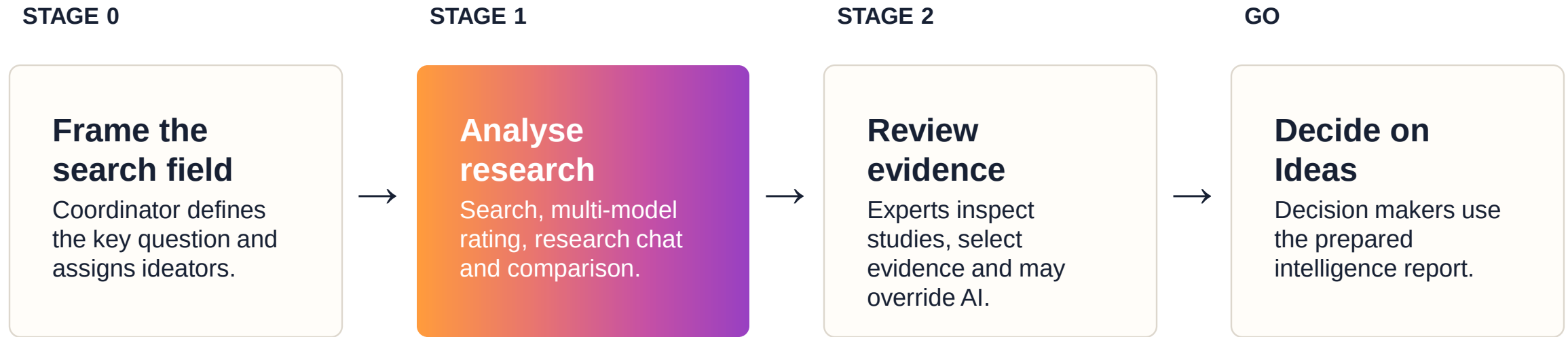
Demo example project developed to outline how SIM works, supported by AI and big cloud data.

SmartSPI



Digital & Green Skills Towards Future of the Mobility Ecosystem (Trireme) is a four-year transnational project funded under the European Union's Erasmus+ programme. The project consortium is established to encompass a range of activities to bridge both conceptual and technological facets of the Mobility-Transport-Automotive ecosystem. Simultaneously, the consortium endeavours to foster sectoral collaboration, particularly focusing on enhancing skills within the broader mobility ecosystem. The project duration is from 01/03/2024 to 29/02/2028.

From Search Field to Evidence-Based Idea Selection



Human accountability remains explicit at the review and decision gates.

Agreement is visible at both score and criterion level

For each research item, every model produces a summary, an overall 1–10 rating and true/false judgments against the shared validation criteria.



The paper describes the comparison logic, but does not publish aggregate agreement statistics.

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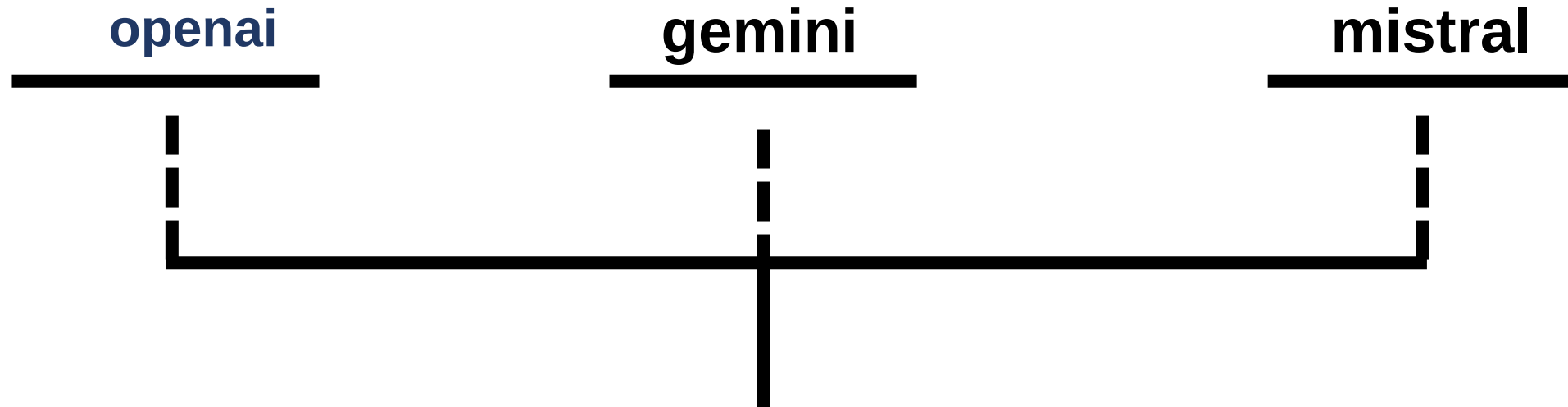
For each research item, every model produces a summary, an overall 1–10 rating and true/false judgments against the shared validation criteria.



The paper describes the comparison logic, but does not publish aggregate agreement statistics.

« vehicle electrification europe versus china »

↓ Scholarly (only
authenticated studies are
eligible)



Calculated rating of information based on defined
data validation criteria
& summary of relevant findings
(LLMs analyse + own mathematical lib)

What makes SmartSPI different

Most organizations use one GenAI service. SmartSPI adds comparison, source validation, and human review.

TYPICAL GENAI USE

One model. One answer.

- A single service is treated as authoritative
- Results are rarely compared across models
- Referenced research may not be checked



SMARTSPI

Evidence before trust.

- Compares results from multiple GenAI models
- Checks whether cited sources are valid research
- Applies agreed validation criteria and expert review

Corporate decisions are only as reliable as the evidence behind the AI result.

Ten criteria make evaluation of AI models comparable

Each model rates the same evidence against a shared true/false framework; agreement can then be compared and reviewed.

Accuracy

Real-world correctness

Consistency

Uniform across datasets

Completeness

Required data present

Timeliness

Current and available

Validity

Correct formats and standards

Integrity

Protected from alteration

Authenticity

Trusted origin

Relevance

Fits the decision context

Reliability

Dependable results

Verifiability

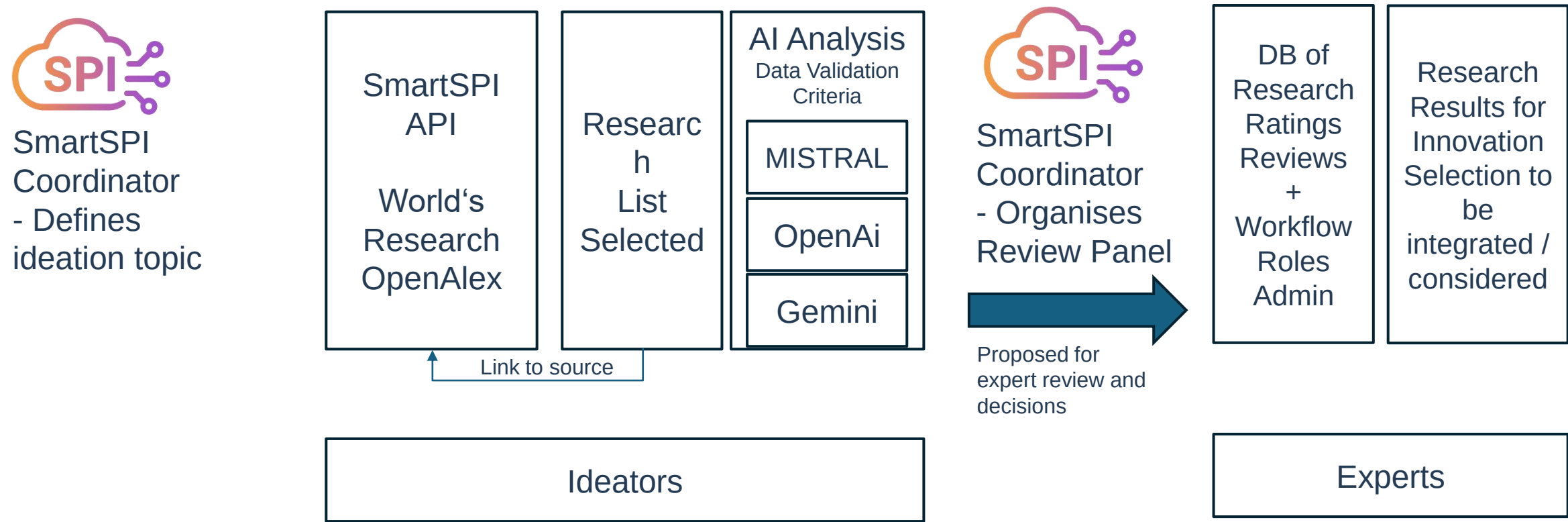
Can be independently checked



Use Case

Idea and Opportunity Management – ISO 56007

AI models as part of an ideation process



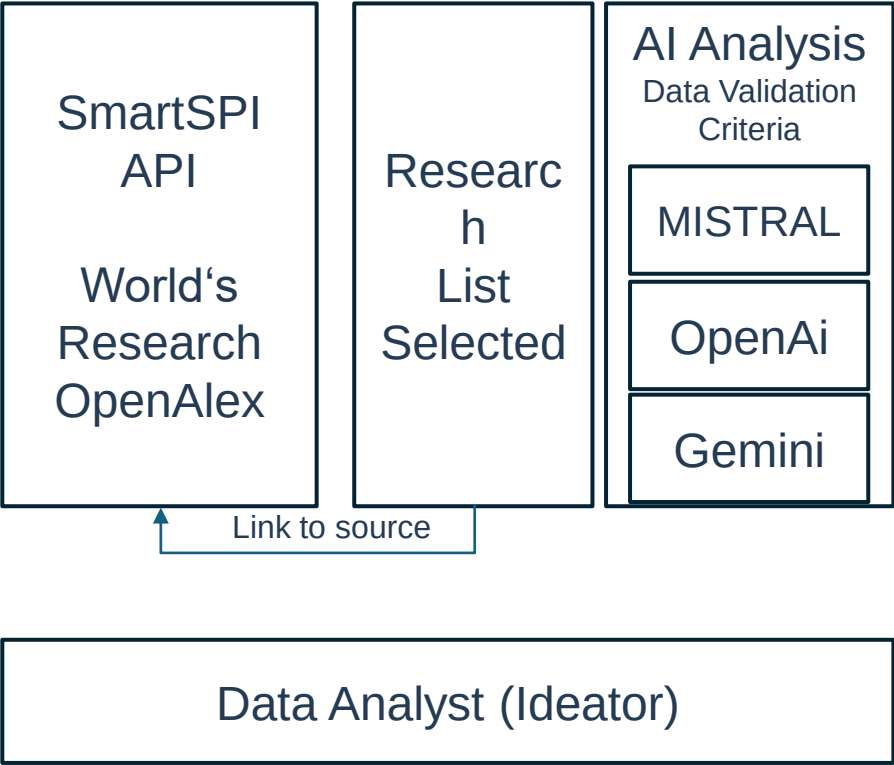
Use Case

Strategic Intelligence Management – ISO 56006

AI models as part of an open data analysis strategy



SmartSPI Coordinator
- Defines strategic intelligence topic for forecast analysis



SmartSPI Coordinator
- Organises Review Panel



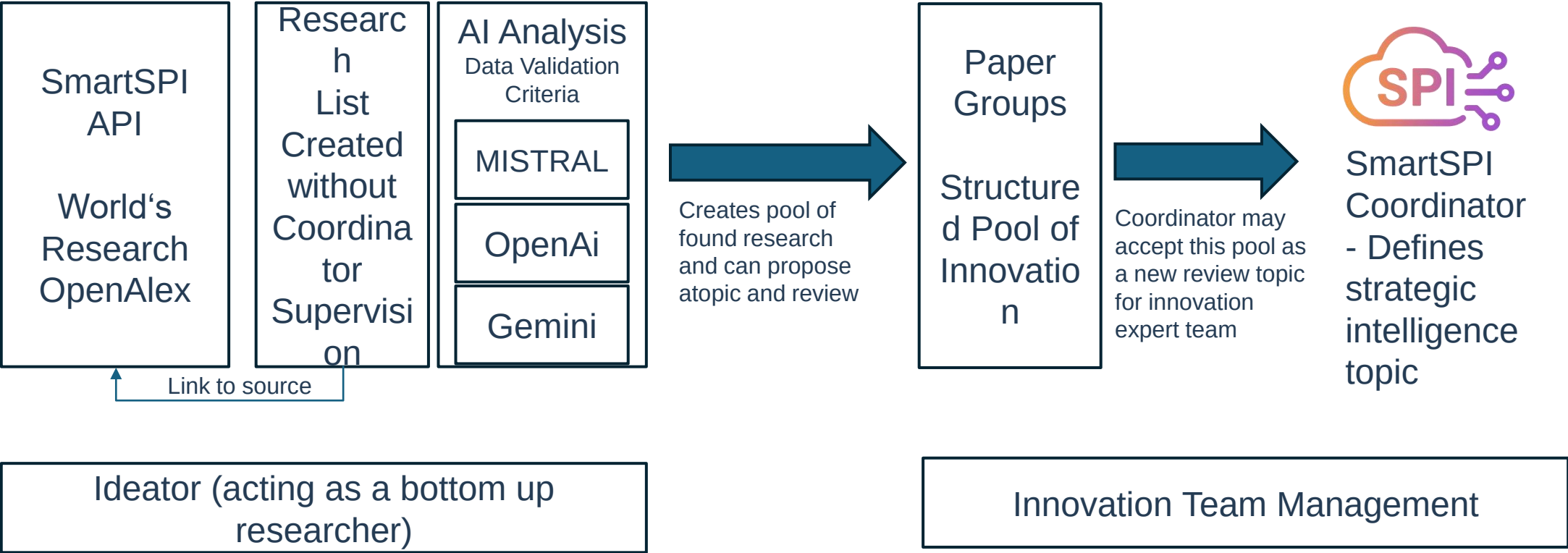
Proposed for expert review and decisions



Use Case

Ideator Freely Creates Research and Proposes Topic

Idea Management Tool and Database



SmartSPI: Latest Features and Ongoing Development

From research to decision-ready innovation opportunities



What are real-world case studies for recent frugal innovation in the automotive sect|

Semantic ▾

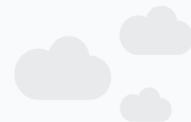
arXiv ▾

Explore Search Field

Sect

Section

sector



Autocomplete

Suggests terms as you type.

SmartSPI: Latest Features and Ongoing Development

From research to decision-ready innovation opportunities



Year From
2016

Year To
2026

Citations >
0

Sort By
Newest First

Language
Any

Content
x - ✓ Abstract x - ✓ PDF



What are real-world case studies for recent frugal innovation in the automotive sector?

Semantic

OpenAlex

Explore Search Field ↻


Mapping the research landscape...

Autocomplete

Suggests terms as you type.

Semantic Search

Finds relevant work by context.

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What are real-world case studies for recent frugal innovation in the automotive sector?

Semantic

OpenAlex

Explore Search Field

Real-world case studies for recent frugal innovation in the automotive sector include the development of the Dacia Logan and the Tata Nano, both designed to be affordable vehicles for emerging markets. Additionally, Maruti Suzuki India Limited has focused on enhancing the efficiency of its small gasoline engines for entry-level hatchbacks. The provided search results highlight these |

Autocomplete

Suggests terms as you type.

Semantic Search

Finds relevant work by context.

Direct AI Answer

Provides source-based answers.

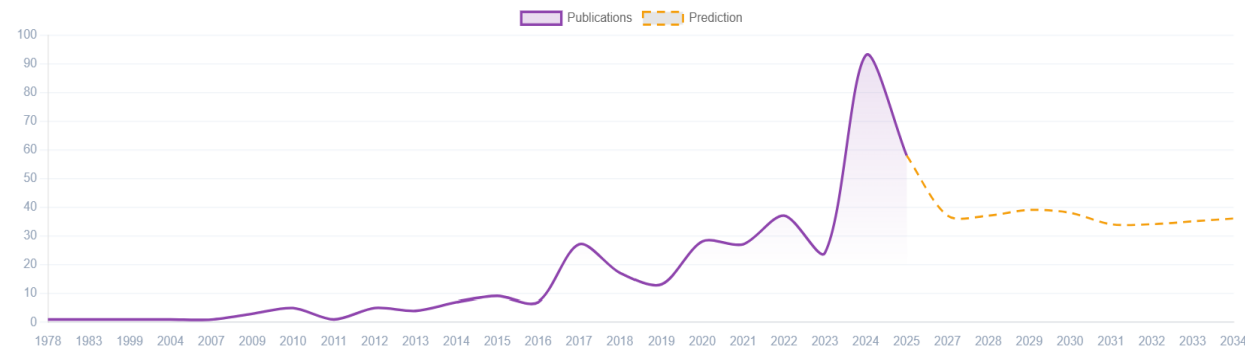
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Research publications over time ⓘ

Contributions by institution ↗



What are real-world case studies for recent frugal innovation in the automotive sector?

Semantic ▾

OpenAlex ▾

Explore Search Field

Real-world case studies for recent frugal innovation in the automotive sector include Maruti Suzuki India Limited's continuous enhancement of its 0.8L gasoline engine for entry-level hatchbacks and the Dacia Logan. Additionally, the African used automotive parts business demonstrates frugal innovation through revalorization, where local players renovate and reuse parts, creating social value for consumers. These examples highlight how companies and local actors achieve efficiency and affordability by optimizing resources and challenging traditional over-engineering.

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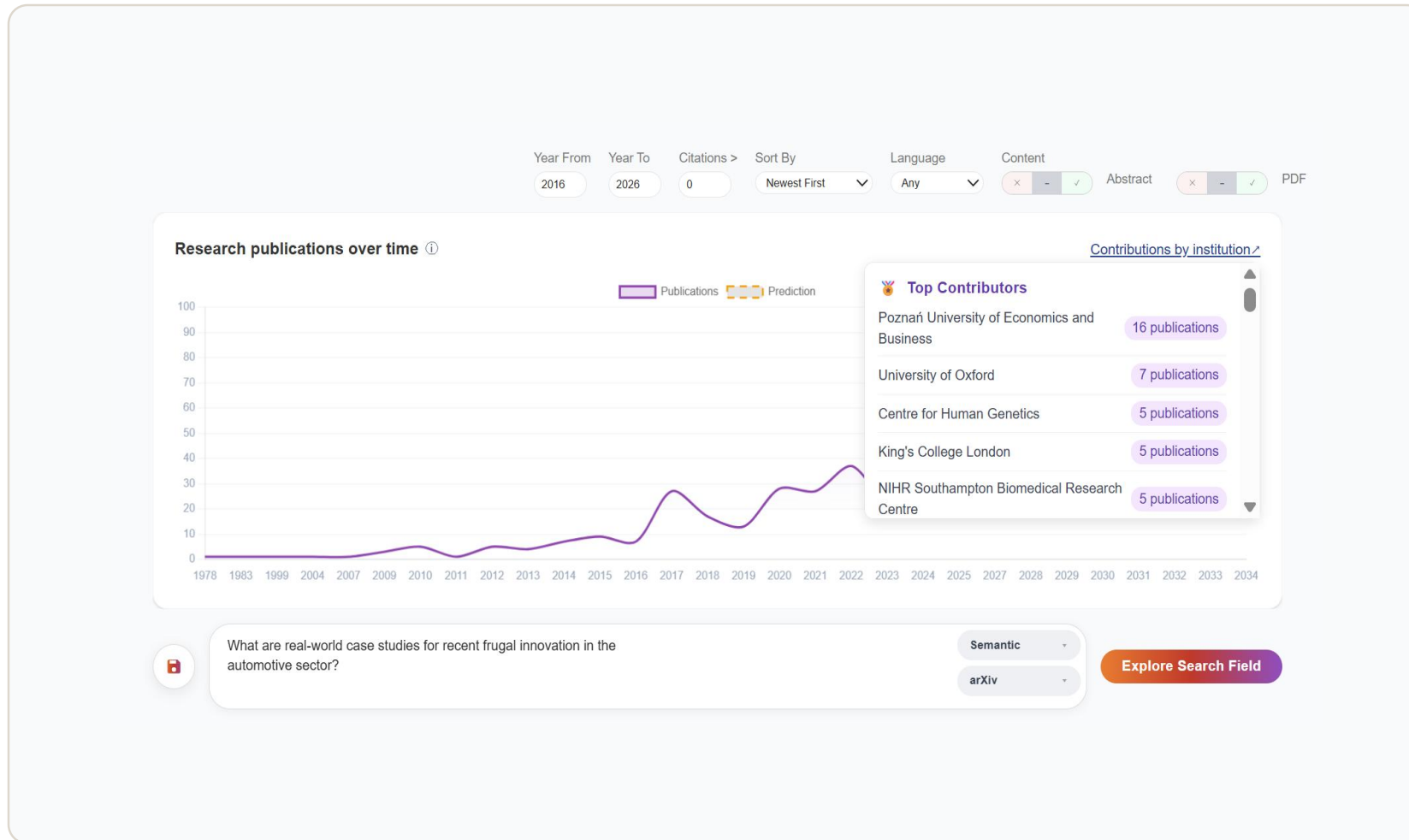
Current and Future Trend

Shows how the topic is evolving.

SmartSPI: Latest Features and Ongoing Development



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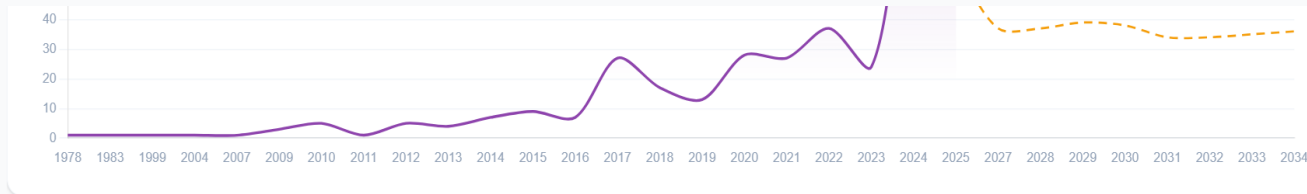
Shows how the topic is evolving.

Top Contributors

Shows research institutions.

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OpenAlex
General scholarly database ✓

arXiv
AI, computer science, mathematics preprints

PubMed
Biomedical and healthcare research

0.8L gasoline engine for...
...olorization, where local...
...cy and affordability by

Frugal Innovation: The Case of Dacia Logan

Soukaina Bendidi, Kenza Elkadiri, Mohamed Iazza

Innovative Use of Basic Technologies for a High-Efficiency, Low-Cost Small Displacement Gasoline Engine

Amandeep Singh, Jaspreet Singh, Ankit Jalan, Narinder Kumar

Frugal engineering: challenging performance-improving paradigms in the context of automotive material development

Achtelik, Timo

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Source Filter

Enables filtering by source.

SmartSPI: Latest Features and Ongoing Development



From research to decision-ready innovation opportunities

Frugal innovation in the automotive sector

Deadline: Sep 10, 2026



SmartSPI Review Report

Generated Ideas

Idea Title	Description
Modular Frugal EV Platform	Develop a low-cost, modular electric vehicle (EV) platform focused on standardized, easily reconfigurable modules (powertrain, battery pack, body) to enable rapid local assembly and cost reductions. This builds on papers about frugal EV strategies and modularity (Hyundai India case) by demonstrating how modular design and frugal engineering can lower entry barriers and speed market adaptation in emerging and cost-sensitive markets.
Product Frugality Measurement Toolkit	Create a practical toolkit (metrics, checklists, and a software scoring tool) to assess product frugality across cost, resource intensity, performance sufficiency, and user-context fit. Grounded in the paper on conceptualizing and measuring product frugality, this will help firms and suppliers quantify frugality, prioritize design trade-offs, and benchmark frugal design choices during development.
Supplier Frugal Innovation Pathways Program	Run a pilot program with automotive suppliers to map innovation pathways and embed frugal routines (e.g., bricolage, reuse, simplified testing protocols) into their product development processes. Inspired by studies on auto components and German supplier innovation, this program would produce repeatable routines, training modules, and case studies to scale frugal practices across supplier networks.
Frugal Co-creation Ecosystem Pilot	Establish a collaborative ecosystem that brings OEMs, local suppliers, universities, and user communities together for co-creation of frugal vehicle solutions, using living labs in a target emerging market. Building on the Hyundai India study, this pilot will test governance models, IP-sharing arrangements, and collaborative routines that accelerate frugal innovation while aligning with local institutional contexts.
Low-cost Vehicle Retrofitting Kit	Design and validate an affordable retrofitting kit (e.g., lightweight materials, simplified HVAC, low-cost ADAS sensors) to upgrade older vehicles for improved efficiency and safety at low cost. Drawing from the Dacia Logan case and frugal EV strategies, this project targets large installed bases.

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Source Filter

Enables filtering by source.

Search Field Ideas

Suggests ideas based on search field.



Trusted AI supported decision-making requires a defined process and validation, not automation alone.

1 Frame the search field

2 Analyse research

3 Review Evidence

4 Decide on Ideas

