Market Research

Workshop Communication Activities | ErUM-Data | 17th of June

About the team

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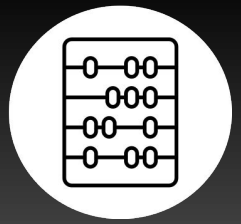
Executive Summary

ErUM-Data must shift from **insider broadcasting** to a **targeted external strategy**



Out of scope

Findings reflect the **perspective of selected internal community** representatives. External stakeholders, budget planning, and production logistics were not part of this analysis.

Status Quo	Across all PESO dimensions, ErUM-Data's communication is **active but uncoordinated: paid** and **earned media** have not been used**. The Hub's networking channel ErUM-Data Hub** has a follower count of under 3% of its own community **on it's best performing channel, LinkedIn**, with **instagram under 1%** and **Youtube negligible**.
Target Audience	Only S1 **(technology scouts)** and S2 **(applied researchers)** combine **the stakeholder value** and **attractiveness** to justify **immediate investment (according to the JTBD survey)** - all other segments are secondary.
Channel & Formats	Across the network, the ErUM-Data community communicates through **scattered uncoordinated accounts** - separate instagram, LinkedIn and YouTube accounts - **so even higher-reach formats don't add up** to more than a small fraction of their potential audience.

What is ErUM-Data & the ErUM-Data Hub?

The exploration of Universe and Matter (ErUM) Data Action Plan is the...

...initiative funded by the BMFTR which aims to create conditions for the basic scientific research of tomorrow and promotes a coordinated approach and broad understanding. From Big Data to Smart Data - Digitization in Fundamental Research in Natural Sciences.

The exploration of Universe and Matter (ErUM) Data Hub is the..

... central networking and transfer office for the digital transformation in the exploration of universe and matter.

ERUM
DATA HUB

The activities of the ErUM-Data Hub are divided into 4 work areas

Networking

Exchange

Digital competencies

Communication

ERUM
DATA HUB

What does the ErUM-Data Community Network currently look like?

KAT. Komitee für Astro. Teilchen. Physik

KET Komitee für Elementarteilchenphysik

Komitee Forschung mit Synchrotronstrahlung

R D S

ERUM DATA HUB

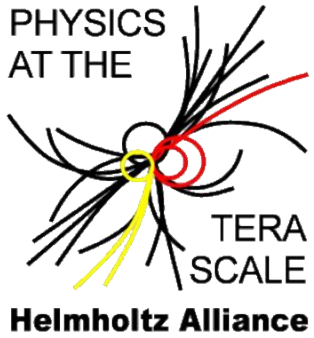
KFB

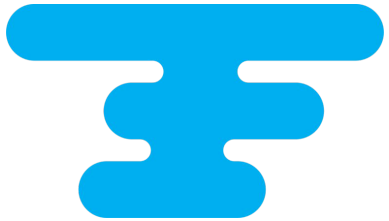
KHuK

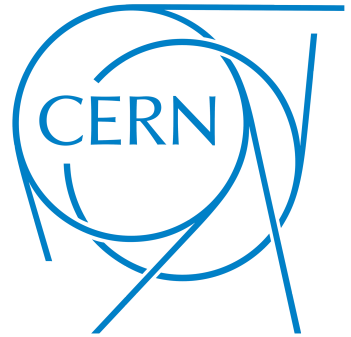
Komitee Forschung mit Neutronen

Komitee Forschung mit nuklearen Sonden und Ionenstrahlen

ErUM-Data Partners & Collaborators







Where Is ErUM-Data Communication Today?

Reviewing the Current Comms Channels

A PESO Audit was conducted across four communication entities within the ErUM-Data network (ErUM-Data Hub, Netzwerk Teilchenwelt, LHC Deutschland, and Belle II Germany) to establish a baseline of current communication activity and identify structural gaps. The audit produced a channel-level breakdown across the primary platforms used for external communication, revealing that communication was largely fragmented across the network, with no meaningful presence in paid channels.

Model reference: Dietrich, G. — *Spin Sucks: Communication and Reputation Management in the Digital Age*, Que Publishing, 2014.

ErUM-Data Hub

Current communication is only addressed to insiders or miss the demand of the target group.

Across all four PESO dimensions, ErUM-Data Hub's communication speaks to a fraction of the existing community. Paid and Earned have never been used and even where Shared and Owned channels are active, they don't consistently reach or engage beyond insiders.

Paid

Google Search/ Display/ Video Ads, Meta Ads, LinkedIn Ads

Earned

Press, Mentions, Collaborations

Shared

Instagram, LinkedIn, YouTube

Owned

Website, Podcast

191

Instagram followers

532

LinkedIn followers

4

YouTube followers

vs. an ErUM community of ~20,000* scientists

Paid

Never used

Earned

No media pickup

Shared & Owned

Active, but fragmented

- Instagram: 191 followers out of ~20,000* community members (under 1% of the community)
- LinkedIn: Best performing channel has a follower count of under 3% of the community.
- Website: insider tone, mixed DE/EN, acronyms unexplained
- Podcast: German-only
- YouTube: 1 video

Follower count last checked on the 14th of June 2026 - *number taken from the ErUM-Data Hub Website

Netzwerk Teilchenwelt

Focus is on teaching material and engaging young people.

Across all four PESO dimensions, Netzwerk Teilchenwelt's communication speaks to its existing community. Paid and Earned have never been used and even where Shared and Owned channels are active.

Paid

Google Search/ Display/ Video Ads, Meta Ads, LinkedIn Ads

Earned

Press, Mentions, Collaborations

Shared

Instagram, LinkedIn, YouTube

Owned

Website, Podcast, Newsletter

1398

Instagram followers

418

YouTube followers

No official LinkedIn page found

Paid

No evidence of paid media/ads

Earned

3 foundation funders named; no major press found

Shared & Owned

Active & fairly well rounded

- Instagram: 1398 followers out of ~20,000* community members (approx 7% of the community)
- Project partners absent from website
- Youtube: Frequent weekly posts, follower count just over 2% of the community.
- Newsletter with archive present
- Website: Clear and segmented

Follower count last checked on the 14th of June 2026 - *number taken from the ErUM-Data Hub Website

LHC Deutschland

Current communication is well rounded using varying still & video content formats.

Across all four PESO dimensions, LHC's communication speaks to a fraction of the existing community consistently. The material is there but paid media is not being used.

Paid
Google Search/ Display/ Video Ads, Meta Ads, LinkedIn Ads

Earned
Press, Mentions, Collaborations

Shared
Instagram, LinkedIn, YouTube

Owned
Website, Podcast, Newsletter

454
Instagram followers

393
YouTube followers

398
LinkedIn Followers

Paid
No evidence of paid media/ads

Earned
Runs press services

Shared & Owned

Active

- No single channel dominates in follower count, all sitting around 2% of the overall community.
- Newsletter present
- Website: Mentions project partners.
- Teaching Material app

Follower count last checked on the 14th of June 2026 - *number taken from the ErUM-Data Hub Website

Belle II Germany

Communication is limited and therefore misses the demand of the target group.

Across all four PESO dimensions, Belle II Germany’s communication speaks infrequently to its existing community. There is no evidence of Paid and Earned and even where Shared and Owned channels are active, they don't consistently reach or engage actively online.

Paid

Google Search/ Display/ Video Ads, Meta Ads, LinkedIn Ads

Earned

Press, Mentions, Collaborations

Shared

Instagram, LinkedIn, YouTube

Owned

Website, Podcast

193

Instagram followers

47

YouTube followers

No official LinkedIn page found

Paid

No evidence of paid media/ads

Earned

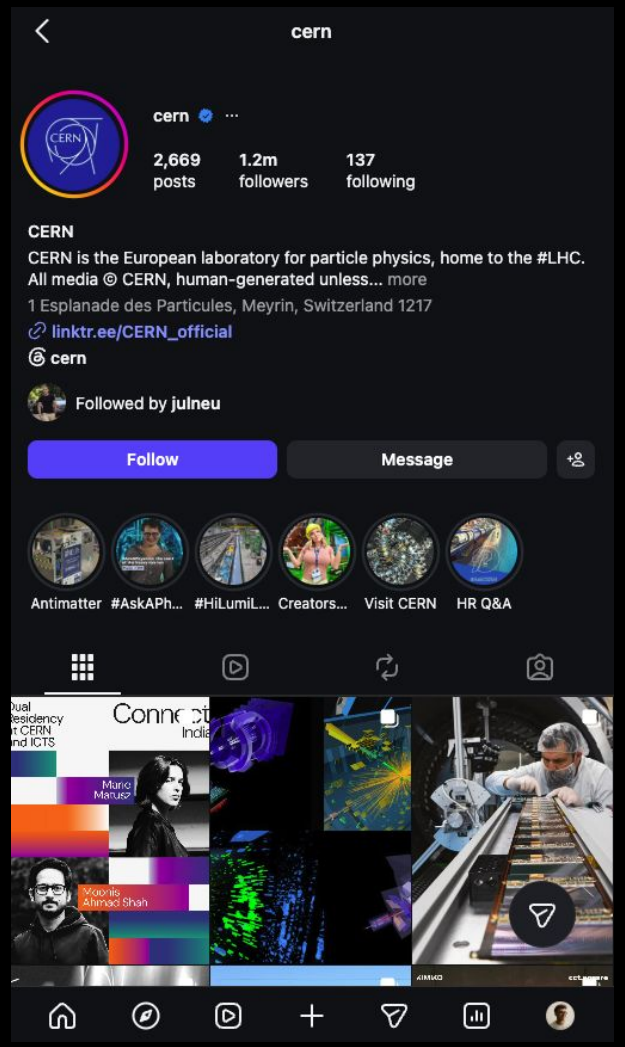
No evidence of media pickup

Shared & Owned

Limited Online Presence

- Instagram: 193 followers out of ~20,000* community members (under 1% of the community) posts 1-5 times a month
- No LinkedIn page found
- Website: Infrequent posts on their blog
- YouTube: 1 video
- Reference partners on their website

Follower count last checked on the 14th of June 2026 - *number taken from the ErUM-Data Hub Website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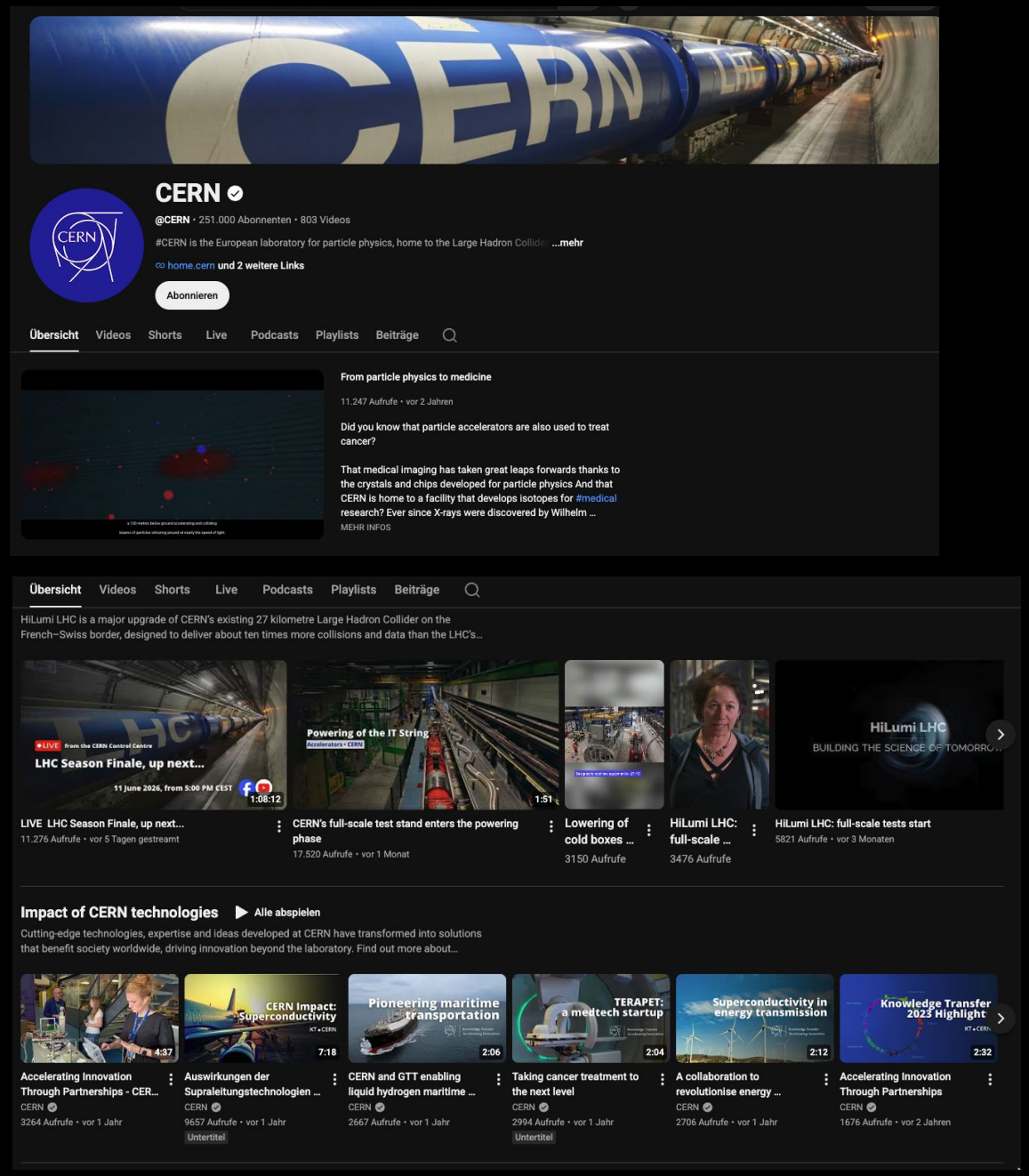
Accelerators • CERN
CERNCOURIER
La Nuit des Musées 2026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2:06
CERN and GTT enabling liquid hydrogen maritime ...
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Example

Who Should ErUM-Data Be Talking To?

Methodological Approach

An early hypothesis proposed addressing the general public as a target group, yet the **general public is not a homogeneous audience**. To disaggregate this assumption in a disciplined manner, a market segmentation methodology originally developed for product and service contexts was adapted to the science communication field. This approach is particularly well-suited to situations where no existing target audience can be directly interviewed, as is the case in early-stage product innovation, where potential customers have not yet been identified or acquired. Rather than waiting for an audience to emerge, the methodology enables the derivation of meaningful segments from an internal perspective, by drawing on multiple stakeholder viewpoints to cover the full breadth of the community. Since no validated external target group taxonomy existed for this context, the ErUM community itself served as the primary information source. Survey participants were deliberately selected to ensure representation across all eight ErUM communities, so that each had the potential to contribute to the emerging segmentation.

A **Jobs-to-Be-Done (JTBD) survey** was chosen because it centers on what **external audiences are actually trying to accomplish**, and u**nder what circumstances,** rather than on demographic proxies or externally imposed category assumptions. This approach surfaces the community's own articulated priorities, reducing the risk of projecting internal assumptions onto external audiences. With a sample of 15 participants, the survey was treated as a qualitative instrument: not a statistically representative poll, but a structured elicitation of the most salient goals and situational triggers relevant to the ErUM context. The survey produced a ranked and validated set of the 20 most important jobs and 12 circumstances, which formed the empirical foundation for the subsequent audience segmentation.

To **characterize** the **four identified segments** in a more holistic manner, the internally collected data was triangulated with externally sourced data from the Statista Consumer Insights Global study (as of March 2026). Science enthusiasts served as a proxy audience for the overarching profile shared across all four segments, enabling the JTBD-derived segmentation to be enriched with **demographic, behavioral, and psychographic characteristics** at population scale. This triangulation approach strengthens the validity and practical applicability of the segmentation by grounding it in a large-scale external dataset.

Research methodology: Moessner / Haegle, Fraunhofer IPA - IEEE Engineering Management Review, April 2024., Statista Consumer Insights Global as of March 2026

Additional Slides & Survey Results: Slides 65 - 68

The fundamental idea of the Job-To-Be-Done Analysis

People don't engage with an organization because of who they are, they engage because of what they're trying to accomplish in a specific situation.

A **"job"** in this sense is not a profession or a task on a to-do list. It is a goal someone is trying to achieve, a problem they want to solve, a need they want to fulfil.

"Circumstances" describe the situation someone is in when that goal becomes relevant.

Source: Moessner / Haegle, Fraunhofer IPA - IEEE Engineering Management Review, April 2024.

The community evaluated the most important jobs and circumstances which form four distinct target segments

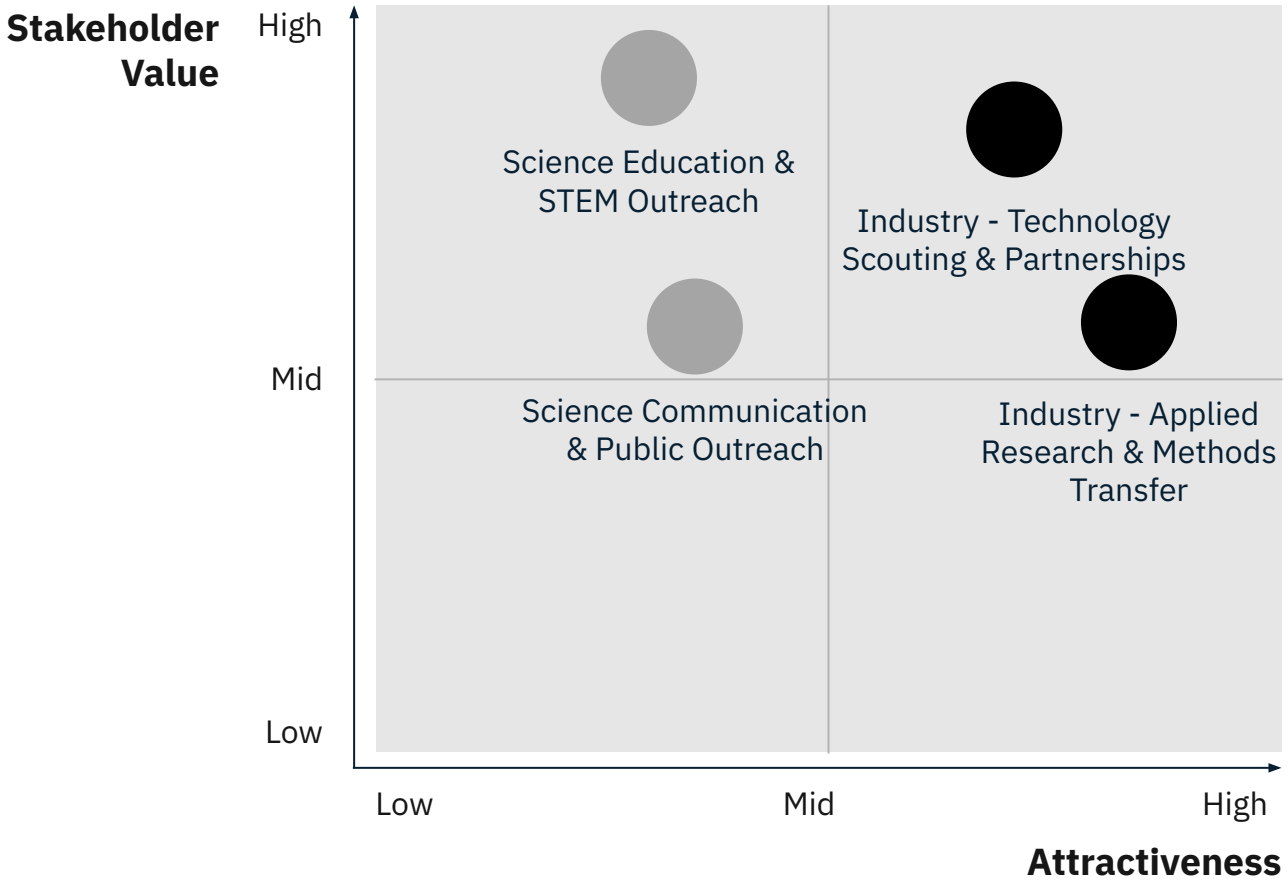
S1 Industry - Technology Scouting & Partnerships

S2 Industry - Applied Research & Methods Transfer

S3 Science Education & STEM Outreach

S4 Science Communication & Public Outreach

S1 and S2 are the two segments that should be prioritized in the first step



All four segments **score above 3.7 on inherent stakeholder value** but only S1 and S2 **cross the attractiveness threshold** that justifies immediate communication investment.

Key nuance: S3 holds the highest BM score of all four (4.1) but falls into Quadrant II caused by the identified attractiveness

S1 and S2 are the two segments that should be prioritized in the first step

Segment	Definition	JTBD Specifications
Industry - Technology Scouting & Partnerships	• **Role:** Innovation Manager, R&D Lead, or CTO • **Current situation:** Preparing a strategic decision (new partnership, funding application, or innovation roadmap) • **Entry channel:** Events or warm referrals • **Primary needs:** Talent access, Research partners, Early visibility into applicable technology from basic research	• **Jobs:** J1, J2, J7, J8, J16 • **Circumstances:** C1, C2, C5, C6, C11
Industry - Applied Research & Methods Transfer	• **Role:** Data Scientist, ML Engineer, or Tech Lead • **Current situation:** Has a concrete data or process problem and is actively searching for a solution method (specific challenge, not strategic) • **Entry channel:** Active search or community recommendation • **Primary needs:** Proven algorithms and tools Expert contacts Option to run a joint PoC (proof of concept)	• **Jobs:** J4, J5, J6, J9, J11, J12, J18, J19, J20 • **Circumstances:** C1, C3, C6, C8, C9, C10, C11

Source: Internal JTBD Analysis based on ErUM Community

S3 and S4 hold strategic value but should be activated once S1 and S2 are established.

Segment	Definition	JTBD Specifications
Science Education & STEM Outreach	• **Role**: Teacher, science educator, or STEM outreach professional • **Current situation:** Working under an educational mandate, searching for materials to bring science to students or the public, not driven by personal curiosity • **Entry channel:** Professional networks or recommendations • **Primary needs:** Trusted content, inspiring stories, and high-quality learning materials to pass on	• **Jobs:** J3, J10, J15, J17 • **Circumstances:** C1, C3, C4, C7, C12
Science Communication & Public Outreach	• **Role:** Science journalist, podcaster, or freelance science writer, plus curious general public with an interest in basic research • **Current situation:** Searching for credible expert sources and compelling stories; or seeking to understand what fundamental research is and why it matters • **Entry channel:** Institutional credibility, media referrals, or organic discovery • **Primary needs:** Trusted spokespeople, accessible narratives, and embeddable content ready to publish or share	• **Jobs:** J13, J14, J23, J27, J29 • **Circumstances:** C1, C2, C3, C4, C7, C10, C17, C15, C13, C16

Source: Internal JTBD Analysis based on ErUM Community

Six JTBD findings challenge the obvious communication assumptions

Key Insights from JTBD Survey Analysis

1. The community's own ranking of **public-facing communication** reflects a **structural blind spot**, not low **strategic value**
2. **Talent recruitment** outranks every other **industry-facing job** and represents an **underused communication lever** (Network Value Creation)
3. The audience's consistently high science literacy means the **communication challenge** is **narrative depth, not accessibility** (Positioning mismatch: storytelling over simplification)
4. **ErUM-Data's growth** channels are dominated by **personal referral**, indicating a **network activation gap** rather than a **discoverability gap** (Community Key Opinion Leaders)
5. **SMEs and startups** are rated as a more receptive industry audience than large corporations, despite the latter being the **assumed primary target** (not only the big guys)
6. **Industry's interest** in **collaborative formats** is as strong as its interest in **pure knowledge access**, pointing to an **underdeveloped co-creation offer** (Value Co-Creation)

Sources: Internal analysis Evermynd®

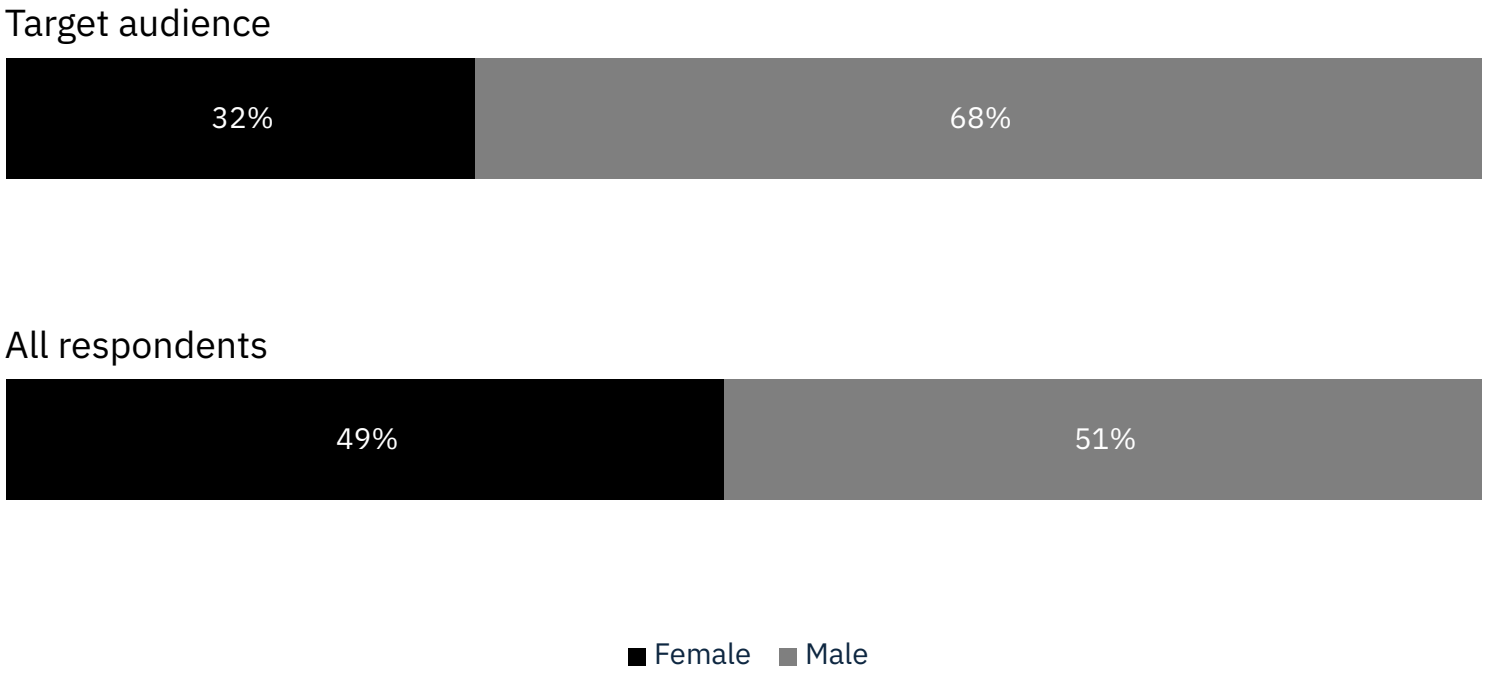
The communication strategy is based on recent consumer research for science & technology enthusiasts

The external target audience of 'science and technology enthusiasts' in Germany is well-educated, affluent, and socially engaged – the communication challenge therefore lies not in simplifying content, but in creating relevance within an already highly intensive media consumption pattern.

Strong male skew (68% vs. 51% average) calls for deliberate tone and channel calibration - if we want to reach more female researchers

Demographic profile

Gender/Sex of consumers in Germany



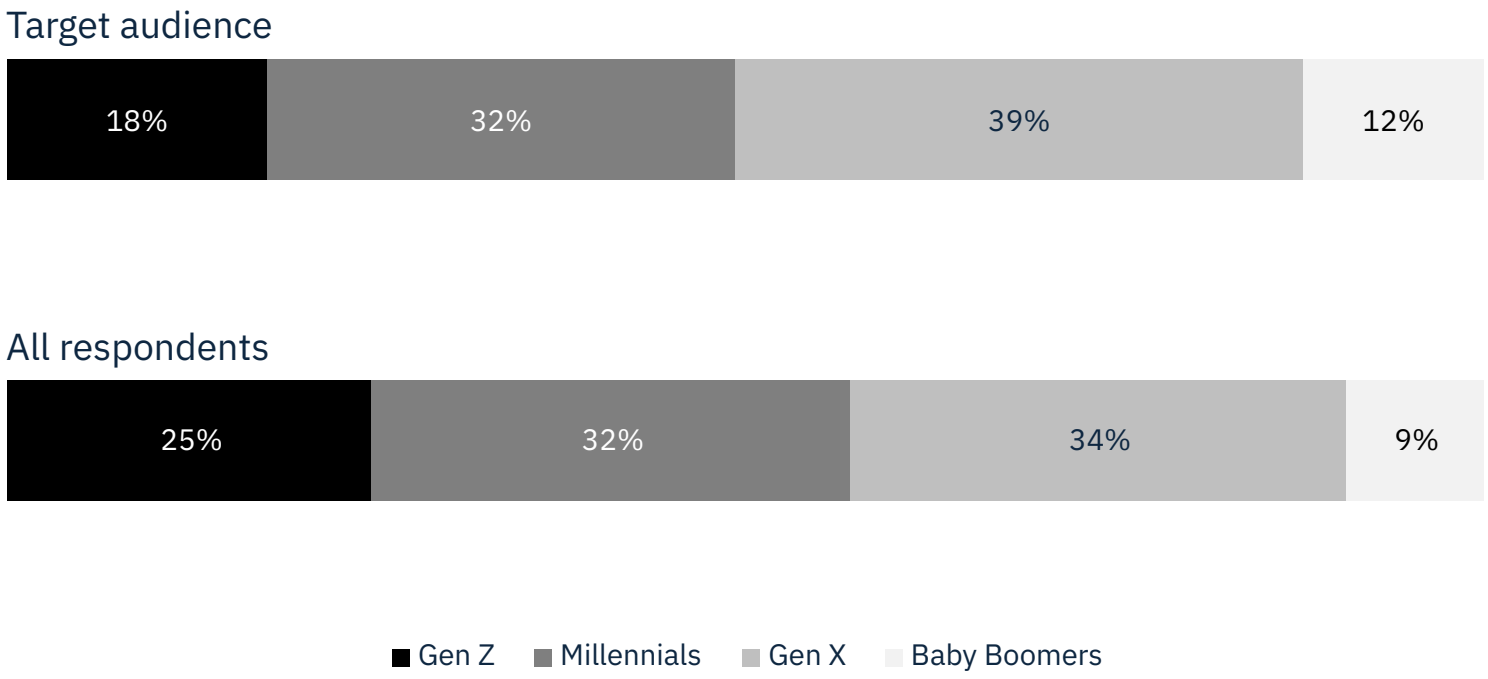
With more than two-thirds of the audience male, **visual language**, **spokesperson choices**, and **platform selection** should be tested for **resonance with a female audience**, without **alienating** the larger but **relevant male segment**. This can be a strategic choice, by representing more female scientists to take a more equitable approach.

Sources: Statista Consumer Insights Global as of March 2026

Concentration in Gen X (39%) and Boomers (12%) signals a professionally established, not youth-oriented, audience

Demographic profile

Age of consumers in Germany



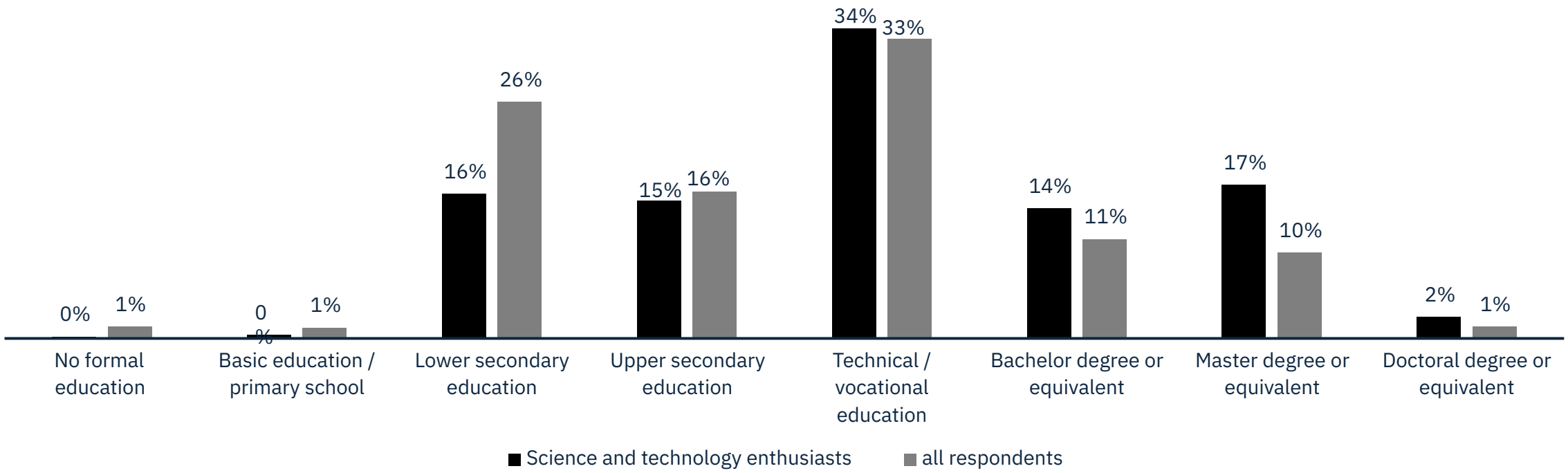
Communication built around **"young innovator"** or **campus-style messaging risks missing** the **core audience**, who are more likely mid-career professionals or established experts seeking depth over novelty.

Sources: Statista Consumer Insights Global as of March 2026

High Master's/Doctoral share (17%/2% vs. 10%/1%) confirms "no science background" is genuinely rare

Demographic profile

Level of education in Germany



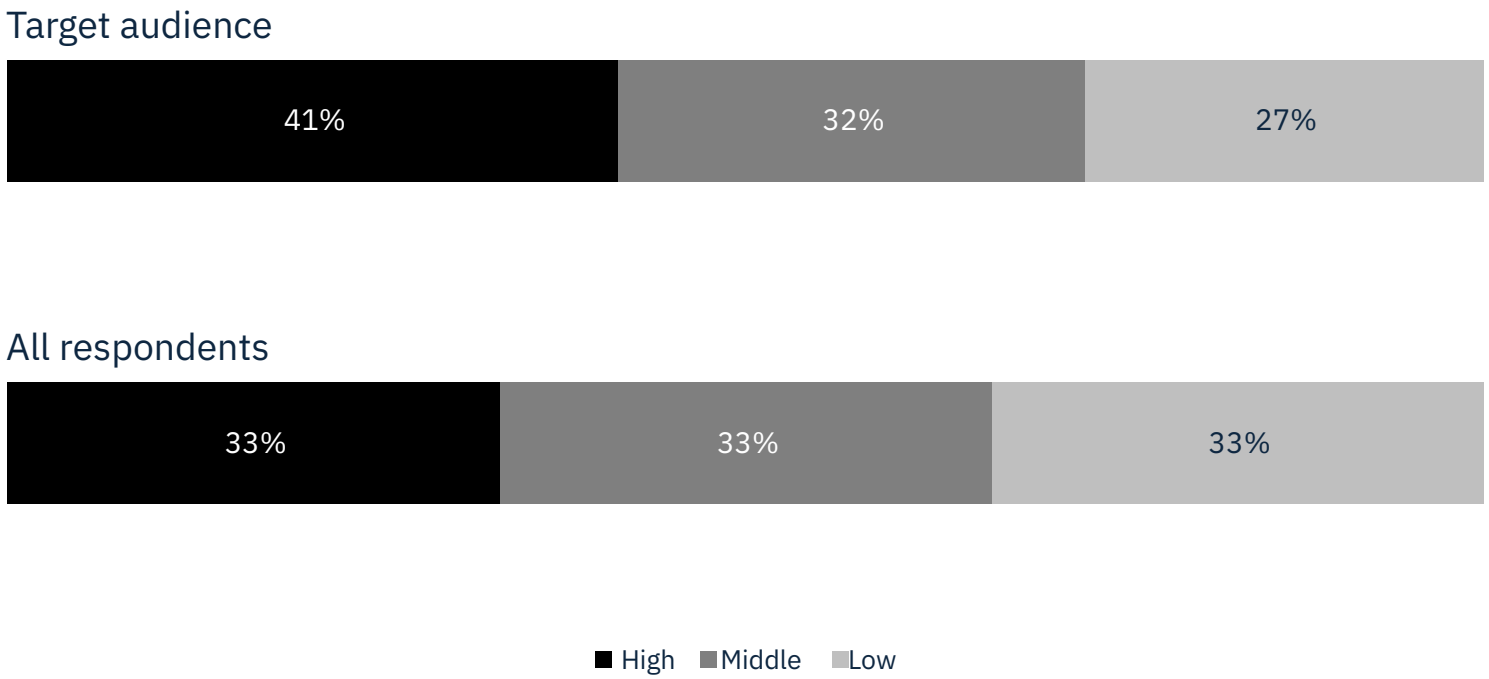
This reinforces that even the **"general public" segment brings substantial technical literacy,** content can assume **baseline familiarity** with scientific concepts and terminology without extensive groundwork.

Sources: Statista Consumer Insights Global as of March 2026

Above-average income (41% high vs. 33%) and urban share (27% large cities) point to an affluent, professional profile

Demographic profile

Share of consumers in Germany in the high, middle, and low thirds of household gross income



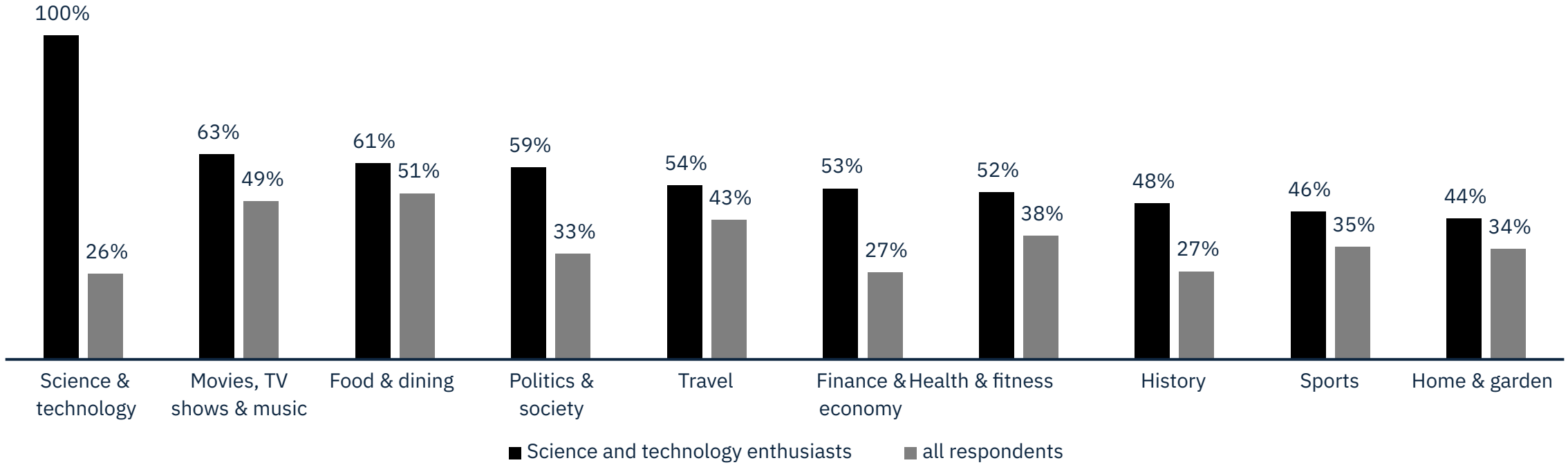
This audience has **discretionary time** and **resources for engagement**, suggesting that **premium-feeling formats** (in-person events, curated content) can work **alongside broad digital reach**.

Sources: Statista Consumer Insights Global as of March 2026

Interests reach well beyond science into politics (59%), economy (53%), and history (48%)

Behavioral/ lifestyle profile

Top 10 interests of science and technology enthusiasts in Germany



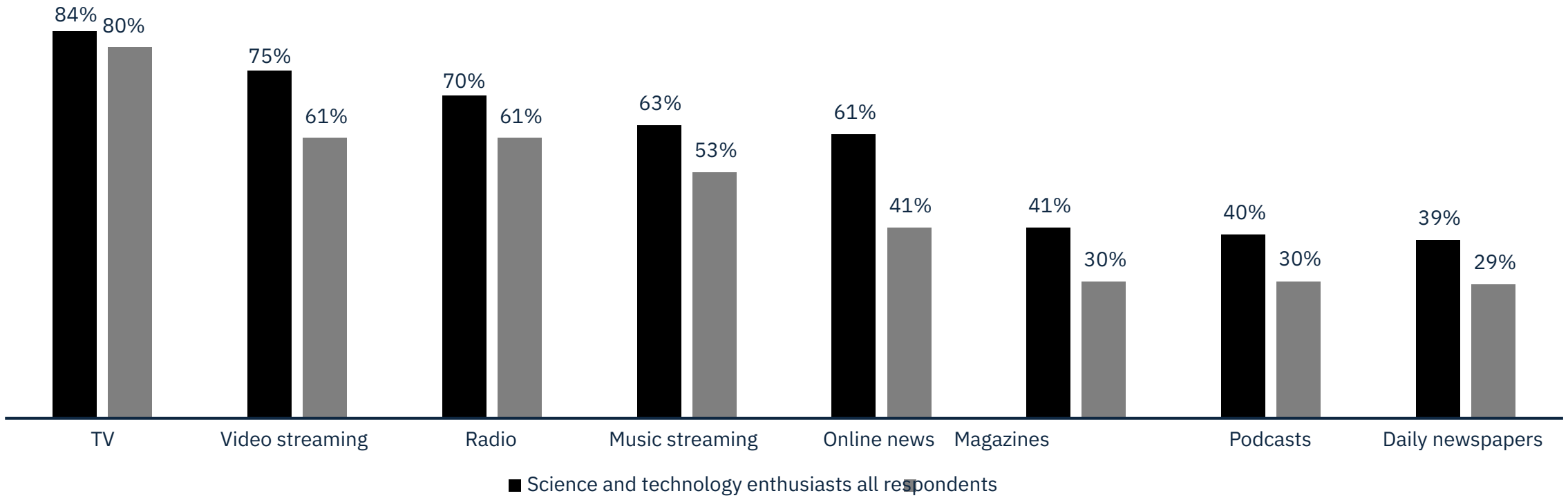
> **Framing science topics** within **broader societal narratives**, like economic impact, historical context, political relevance, will resonate more than **treating science as an isolated subject**.

Sources: Statista Consumer Insights Global as of March 2026

Above-average media use across nearly every channel (TV 84%, streaming 75%, podcasts 40%) means reach is broad but attention is scarce

Behavioral/ lifestyle profile

Type of media consumers in Germany have been using in the past 4 weeks



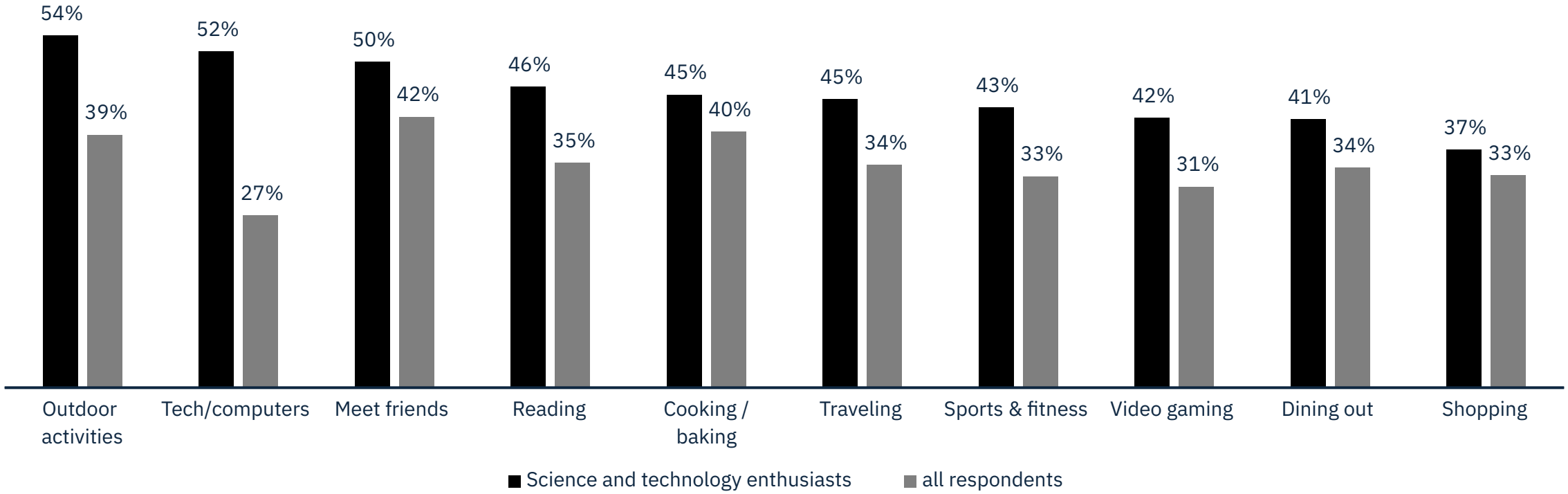
This audience can **theoretically be reached almost anywhere**, but **high overall media consumption** means competing against an **already saturated content diet**, **distinctiveness matters** more than channel selection alone.

Sources: Statista Consumer Insights Global as of March 2026

Higher engagement in reading (46%) and tech hobbies (52%) signals active, not passive, content consumption

Behavioral/ lifestyle profile

Top 10 hobbies and leisure activities of science and technology enthusiasts in Germany



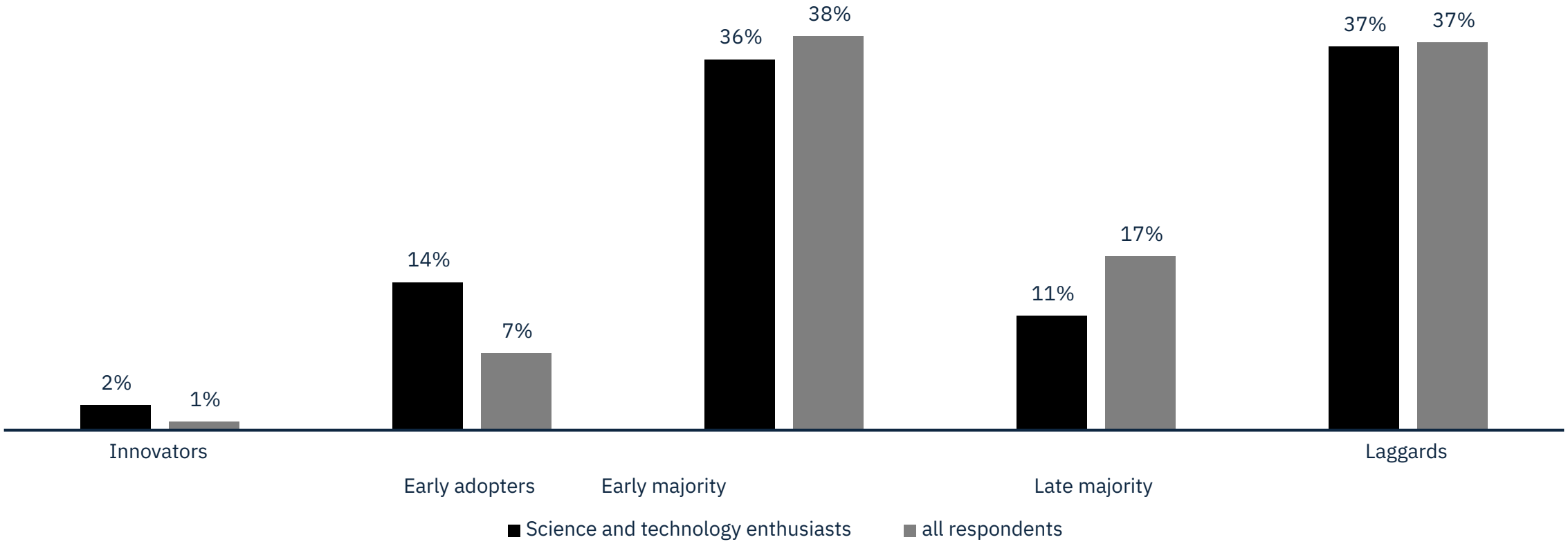
> This is an audience that **seeks out content rather** than **scrolling passively**. Long-form articles, deep dives, and interactive formats are **more likely to land than quick**, surface-level **posts**

Sources: Statista Consumer Insights Global as of March 2026

Stated innovation enthusiasm (41% vs. 29%) outpaces adoption behavior - 37% remain "laggards," same as average

Psychological/ attitude profile

Innovation adopter types based on statements towards innovation by consumers in Germany



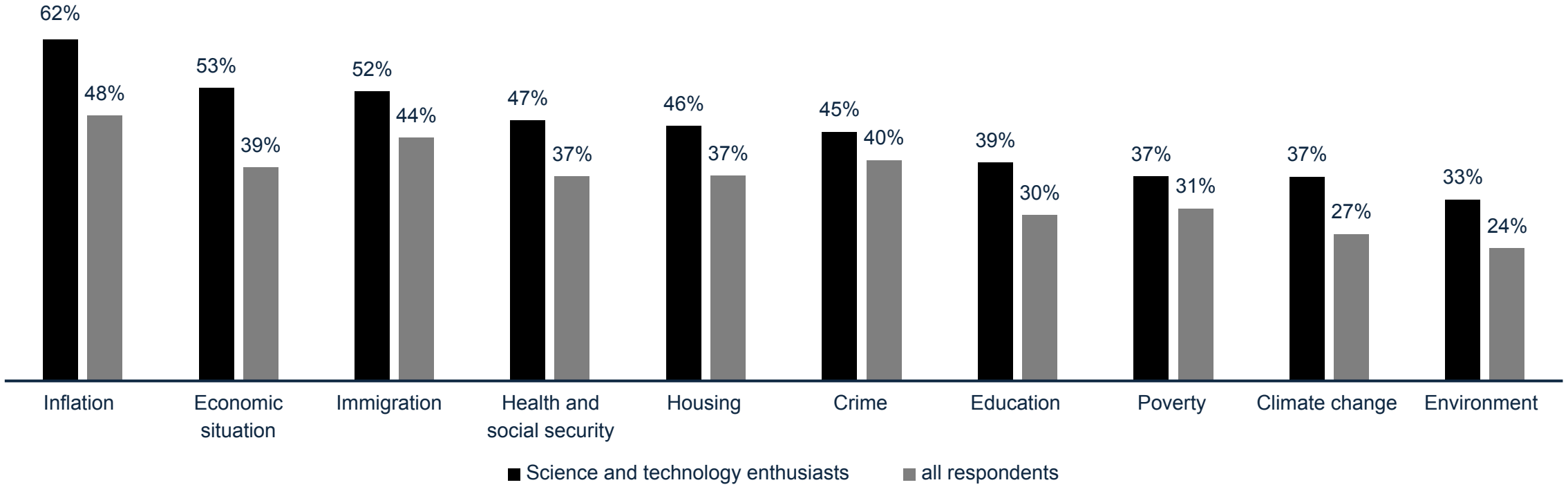
The audience identifies strongly with being **"innovation-minded”,** but this self-image **isn't always matched** by **early-adopter behavior**, messaging can **lean into aspiration** and **identity** while building **credibility through evidence.**

Sources: Statista Consumer Insights Global as of March 2026

Elevated concern across societal issues (inflation 62%, climate 37%, immigration 52%) opens science-and-society storytelling

Psychological/ attitude profile

The 10 most important issues facing Germany according to science and technology enthusiasts



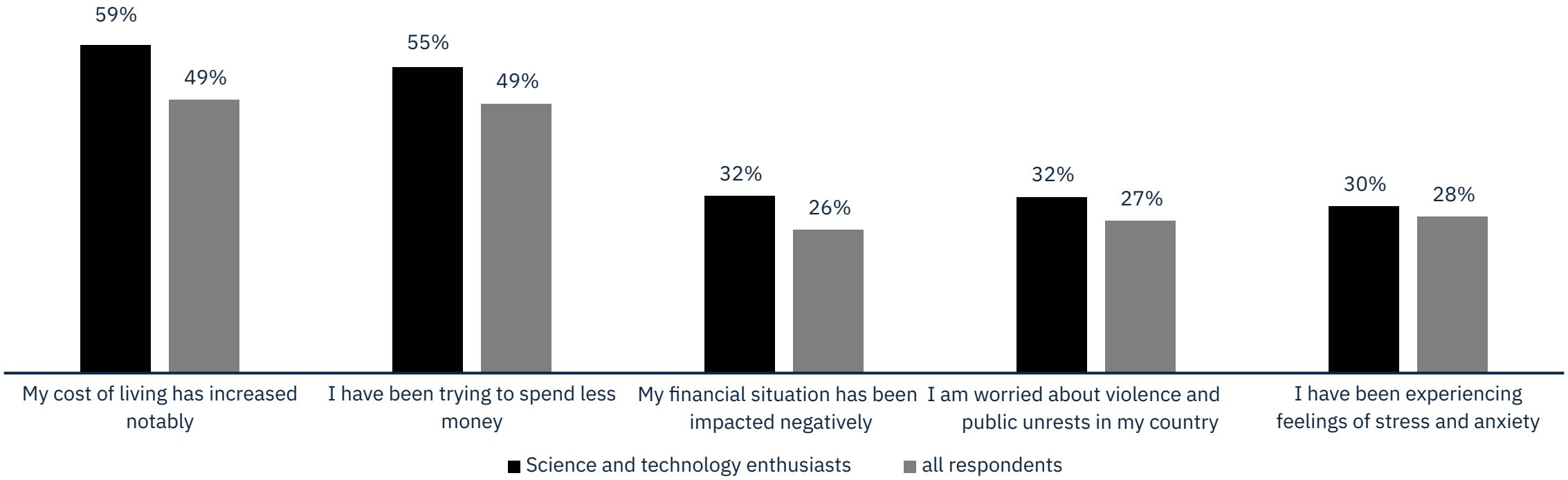
> This audience is more attuned to **how broader societal challenges connect to daily life**, making it natural to frame science/technology stories **around real-world stakes** rather than **abstract progress**.

Sources: Statista Consumer Insights Global as of March 2026

Higher cost-of-living stress (59% vs. 49%) favors accessible over premium framing

Psychological/ attitude profile

Agreement with statements regarding the economic concerns of science and technology enthusiasts



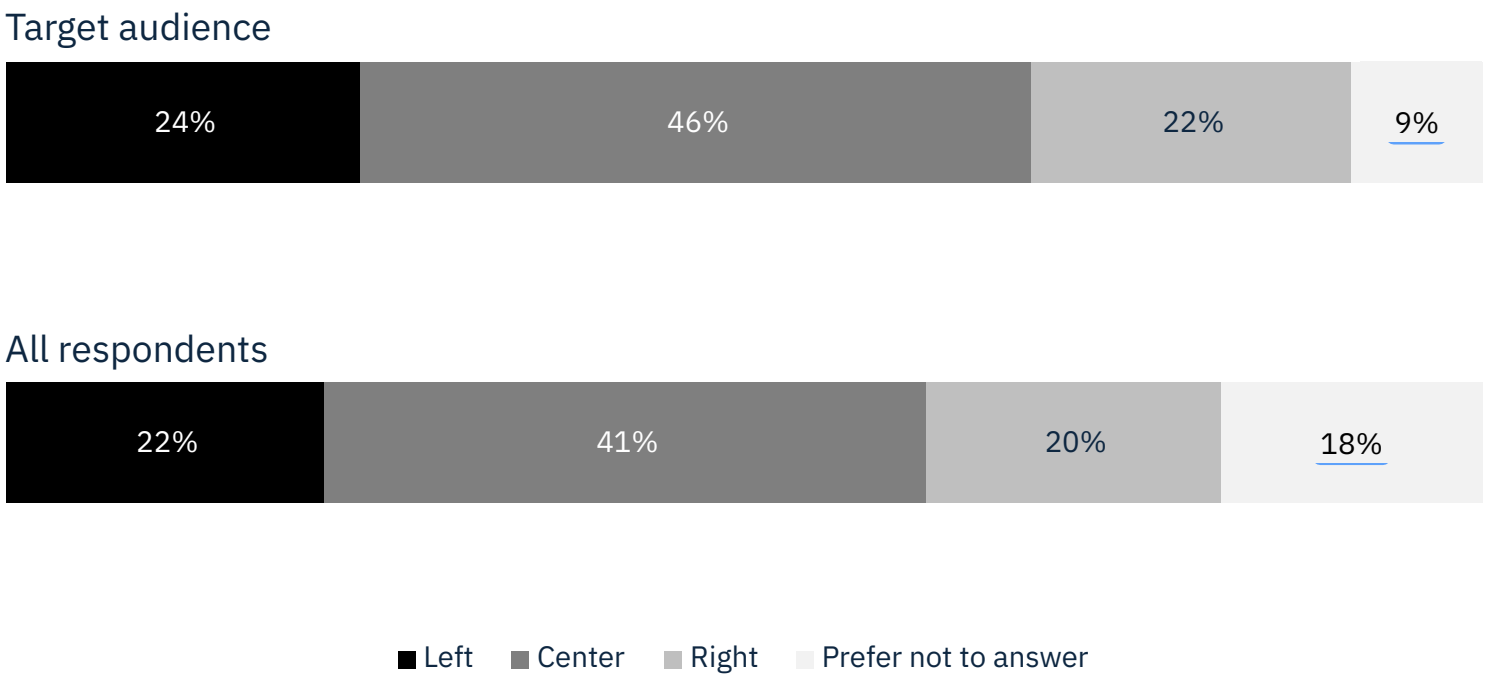
Despite higher average income, this audience **feels financial pressure more acutely** than the general population, **free** or **low-cost engagement opportunities** may land better than **anything perceived as exclusive**.

Sources: Statista Consumer Insights Global as of March 2026

Far fewer "prefer not to say" on politics (9% vs. 18%) signals comfort with opinion and debate

Psychological/ attitude profile

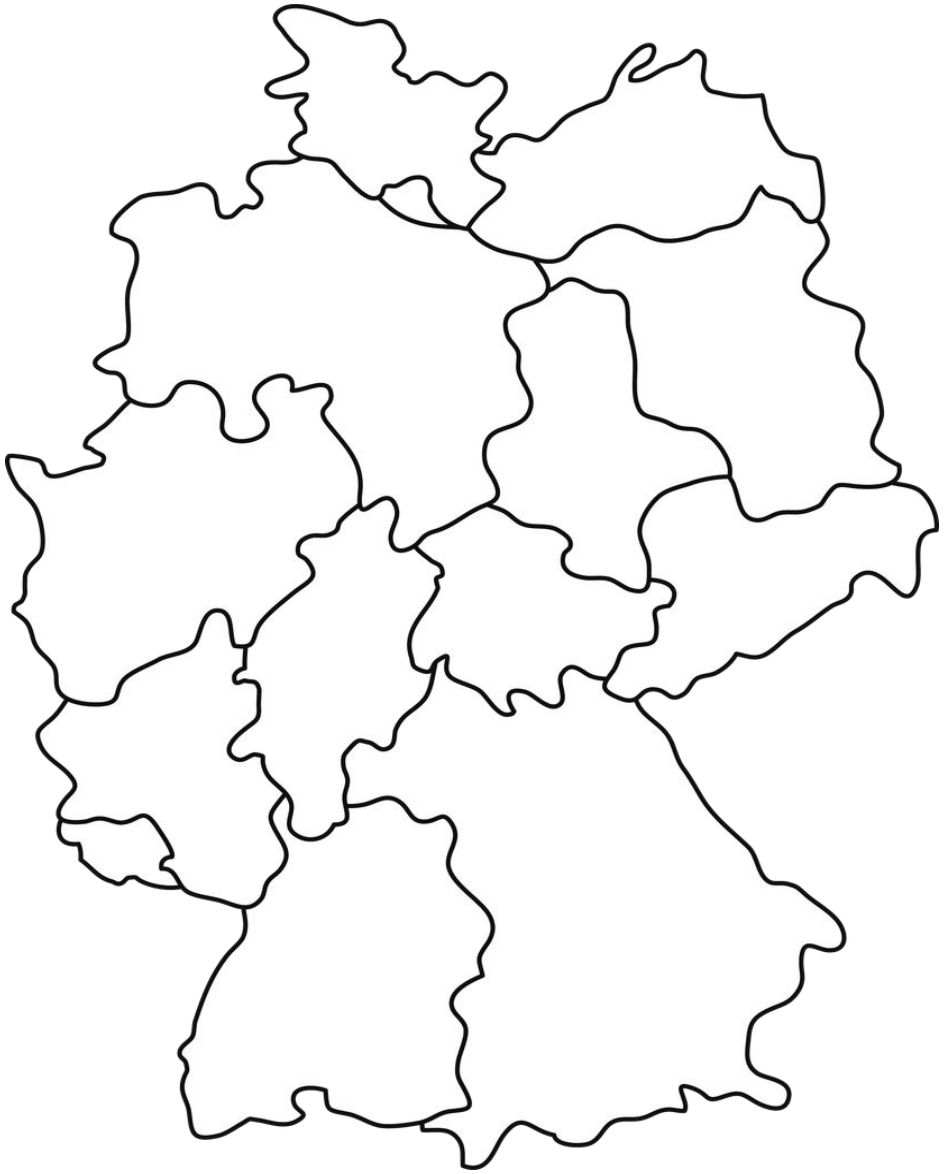
Political attitudes of consumers in Germany



This audience is more **willing to engage with topics** that involve **taking a position**, **suggesting content** that **invites discussion** or **presents perspectives** may perform better than **strictly neutral**, **fact-only formats**.

Sources: Statista Consumer Insights Global as of March 2026

70,4% for the national GDP[1] is contributed by the following industries and builds the geographic target areas for S1

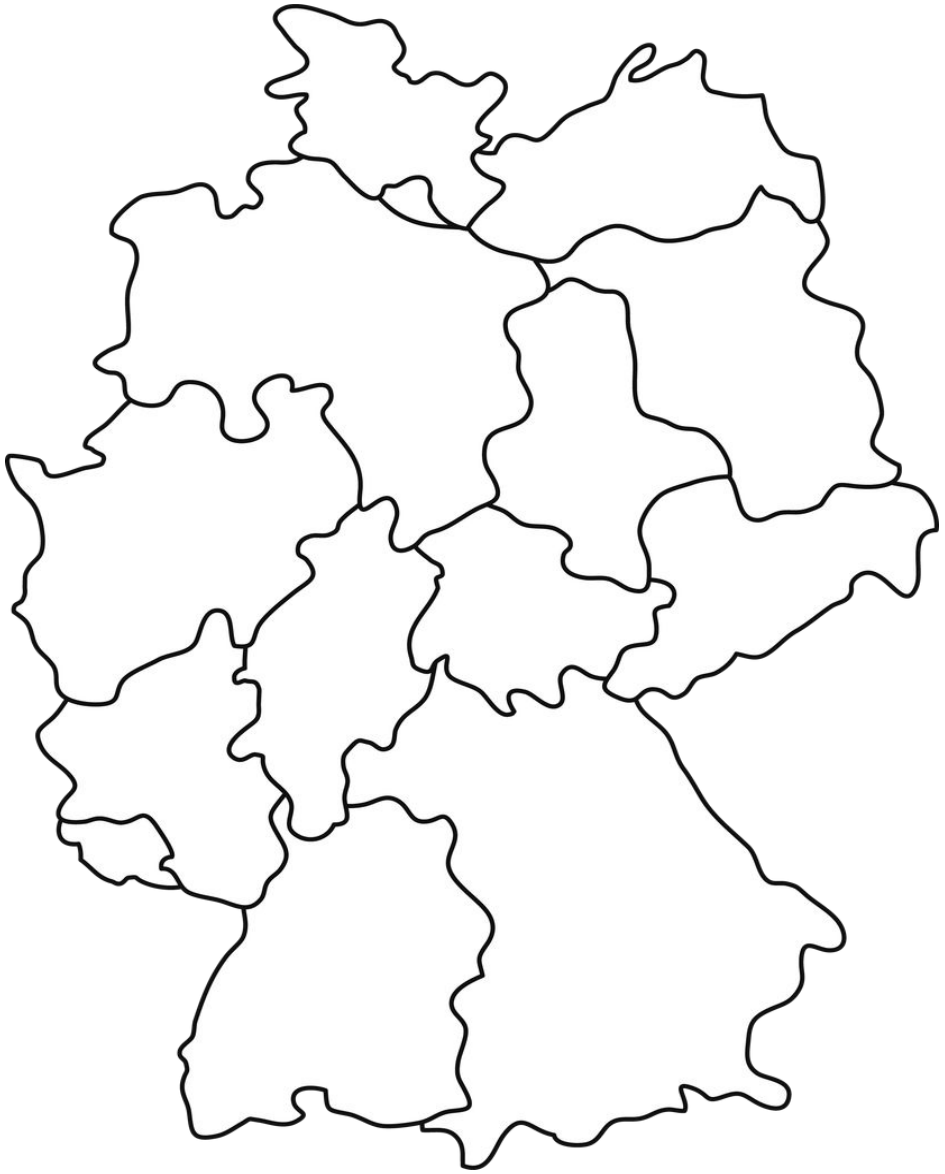


North-Rine Westphalia (industry/steel/chemicals), **Baden-Württemberg** (automotive/advanced engineering), **Bavaria** (aerospace/high-tech), **Central Germany** (chemicals/energy), and **Berlin-Brandenburg** (life sciences/mobility).

Sources: 1 Statista Market Insights 2025

Germany's leading Tech hubs, Berlin (283 AI startups), Munich (200), and Hamburg (71), are also metropolitan regions of national significance, hosting 869, 759, and 1,100 top companies respectively.[1]

Together, they build the geographic target areas for S2: **Berlin**, **Munich**, and **Hamburg**.



Sources: 1 Together, they build the geographic target areas for S2: Berlin, Munich, and Hamburg (AI & tech ecosystems). https://de.statista.com/statistik/daten/studie/1324599/umfrage/staedte-ranking-nach-anzahl-an-top-unternehmen-in-deutschland/

A single communication approach underserves each segment, ErUM-Data needs distinct value propositions and communication architectures for each segment.

How and where should ErUM-Data be communicating?

Where the audience already is...

To map media consumption habits across the identified target audiences, the Statista Consumer Insights Global dataset (March 2026) was used as the primary data source. Since the JTBD analysis identified industry professionals as a primary target group, and since meaningful engagement with ErUM-Data research presupposes a degree of scientific literacy, it can reasonably be assumed that this audience also identifies as science enthusiasts. This overlap justified the use of science enthusiast consumption data as a reliable proxy for the media behavior of the industry segments. The dataset provided an empirical basis for channel and format decisions, with the key finding that video and audio formats dominate attention, while text-based formats play a significant supporting role.

Source: Statista Consumer Insights Global as of March 2026

Mode: video and audio are where attention already is

VIDEO
Primary

- 75% video streaming
- 73% use YouTube
- 41% recall video-platform ads

Tutorials, researcher profiles, explainers

AUDIO
Strong niche

- 40% listen to podcasts
- 70% listen to radio
- Sternenstaub format proven

Needs to be posted more often, on more channels

TEXT
Supporting

- Not a priority on its own
- Valuable only when
- search-optimised for S1 & S2

SEO discovery + reference depth

GITHUB / CODE
Targeted (S2)

- Native habitat for S2
- Discovery via search
- Currently low visibility

Make repositories visible and documented

Sources: Statista Consumer Insights Global as of March 2026; internal JTBD analysis; channel review.

What could this look like?

Across all four PESO dimensions, ErUM-Data's communication speaks to its existing community, but already with some easy wins they can reach their target groups easier. Pilot tests for Paid and Earned and where Shared and Owned channels are active the stories should be better catered for their target audience. Collaborate on posts with different partner channels. Use what is already there, just present it differently and at different frequencies.

Paid

Google Search/ Display/ Video Ads, Meta Ads, LinkedIn Ads

Earned

Press, Mentions, Collaborations

Shared

Instagram, LinkedIn, Facebook

Owned

Website, Podcast

20k

community members

Paid

Worth a pilot

Earned

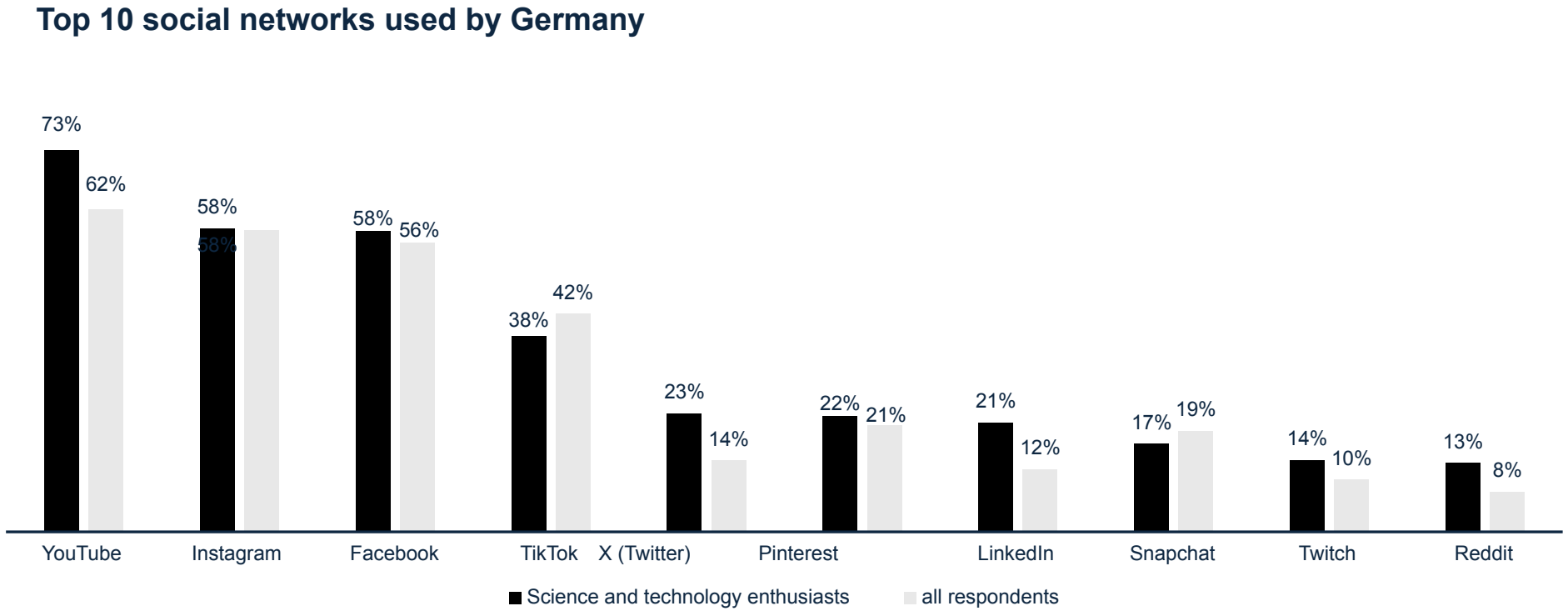
Co-issue PR

Shared & Owned

Active and Connected

- Youtube: Potential real-case series, connect channels
- Instagram: Repost YT shorts
- LinkedIn: Collective tone and strategy
- Website: Platform for outsiders to see and internal community members to connect, defined language strategy in both DE & EN, acronyms explained.
- Sternenstaub Podcast Continue with more frequent episodes

The reach case: 73% use YouTube, but only 21% use LinkedIn



What it means

YouTube is the single biggest reach opportunity.

LinkedIn organic is the network's main shared channel to external audiences, yet reaches a fifth of the audience.

Sources: Statista Consumer Insights Global as of March 2026.

Channel: concentrate investment where reach is high

Where to invest: PESO classification and priority

CHANNEL	PESO	DECISION
YouTube	Shared	Highest potential for reach, underutilised
Podcast	Shared	Format works; requires a monthly production commitment
Search Ads	Paid	Worth a pilot (reaches S2 at the moment of need)
Newsletter	Owned	Launch different variants per segment
Blog	Owned	Reframe from event recaps into segment-specific streams
LinkedIn (organic)	Shared	Lower priority than expected (21% usage vs 73% YouTube)
Press		

PESO = Paid, Earned, Shared, Owned. Usage figures: Statista Consumer Insights Global, March 2026.

S1 strategy: build credibility, then make talent visible

PAID (LinkedIn Ads)

Target job titles (Innovation Manager, CTO, R&D Lead) across the five industrial GDP regions. Message: talent pipeline + partnerships.

SHARED (YouTube + LinkedIn)

“Meet the ErUM Community” researcher profiles (video, monthly). LinkedIn reframed to partnership stories and talent spotlights.

OWNED (Website + Newsletter)

Dedicated industry landing page (case study, talent board, partnership pathways). Quarterly partnership digest to warm leads.

EARNED (Press + Speaking)

Co-issue releases with RWTH, CERN, ESO, DESY when members publish. Researcher speaking slots at Messe and industry forums.

Sources: internal JTBD analysis; Statista Consumer Insights Global, March 2026.

S2 strategy: lower the barrier, make proof tangible

PAID (Search + Video Ads)

Google Search ads on technical keywords ([method] + code / tutorial), landing on blog tutorials. YouTube pre-roll on tech channels.

SHARED (YouTube + GitHub)

Step-by-step tutorial series (8–12 min) with code in the description. GitHub repos public, documented, issues open for questions.

OWNED (Blog + Newsletter)

“Methods & Tools” tutorials, SEO-optimised. Monthly Practitioner Pulse: one new tool, one tutorial, one open question.

EARNED (Trade Press)

Feature in Heise, c’t, Spektrum and member newsletters when methods ship. Expert interviews on data-science outlets.

Sources: internal JTBD analysis; Statista Consumer Insights Global, March 2026.

The ErUM-Data Hub Newsletter & Blog - one platform, four segment streams

S1
Business & Partnerships

“How Company X cut R&D time using physics methods”

Explore partnerships → contact form

S2
Methods & Tools

“Implement anomaly detection: step-by-step”

Get the code → GitHub

S3
Education & Outreach

“Teaching quantum mechanics: a lesson plan”

Download curriculum → wiki

S4
Stories & Impact

“Why one physicist left industry for dark matter”

Subscribe → Sternenstaub podcast

Each post carries segment-specific UTM tags; GitHub, wiki, or podcast.

How we will know it is working: validating real reach?

S1 Industry Strategic

TIER 1 · high confidence
Company-domain email + partnership/talent intent; LinkedIn ad click with verified role

TIER 2 · medium confidence
Event badge + role; blog read + partnership CTA click

S2 Industry Operational

TIER 1 · high confidence
GitHub issue with implementation question; search-ad click on a technical keyword

TIER 2 · medium confidence
Blog comment with a specific problem; email click on a tutorial link

S3 / S4 Secondary

TIER 1 · high confidence
Educational domain + lesson download; media domain + interview request; repeat podcast listener

TIER 2 · medium confidence
Newsletter opens; YouTube subscriber watching 2+ videos

Synthesis / Discussion

The core change: from insider broadcasting to a segment-first external strategy. Clear collaboration roles between partners.

TODAY

Insider broadcasting

- One message for every audience
- Channels active but fragmented (4 different ErUM-Data communication channels)
- No paid or earned media
- ErUM-Data Hub Loudest on LinkedIn; its weakest channel
- No analytics, no segment tracking

NEXT

Segment-first strategy

- Two distinct value propositions for S1 and S2
- Channels matched to how each segment arrives
- Video-first (YouTube public), audio sustained (monthly podcast)
- Paid pilots: LinkedIn ads (S1), search ads (S2)
- Collaborate between different Channels
- Monthly validation dashboard by segment and tier

ErUM-Data is a network of eight communities, the strategy makes that network visible and useful, segment by segment.

What’s Next?

Phase Two takes on the following research question:

What should ErUM-Data be saying?

Which content themes, narratives, and interests, information needs, and media usage behaviour from within ErUM-Data **have the strongest potential to engage** the priority target groups and what **does successful science communication in comparable contexts tell us** about what works?

Similar Ecosystem Project Example

Collaeb - Startup Support Ecosystem Aachen

Problem

Aachen’s pre-startup network was fragmented. Across the city, university programs, incubators and support organisations each offered their own consultations, workshops, and resources; but there was no shared entry point for potential founders at any stage to find what was available to them. They needed one place to showcase them.

Collaeb - Startup Support Ecosystem Aachen

Solution

Together with a crew of creatives; an Art Director, 3D artist, copywriter and web developers we built the brand and digital home for Aachen’s startup ecosystem. The result was the rebrand of Collaeb: a unified platform with a developed tone of voice, a manifesto and a single website bringing together all the support the ecosystem has to offer, for everyone from first-year students to early-stage founders. Everything in one place.

Link to Collaeb

Video Production Example (& Investment)

PGI 13 - Research Group Trailer

Google drive link - here

Time Investment Example
Video Production

Pre-production (3-4 days)	Pre-production involves concept development, script writing, and aligning previously filmed content with the script and the client-defined message. Given the specificity of the research, client support in reviewing and approving the script is essential. Including 2 feedback loops
Production (1-3 days)	Production involves the setting up of the filming equipment, make up, equipment checks, and stage set-up as well as the filming of the people or the space in question.
Post-Production (2-4 days)	Editing of the material, integrating audio etc. Including 2 feedback loops
Equipment, music licensing, animations and graphs e.g.	Miscellaneous cost investments.

Final time investment is dependent on the team responsible, as well as the length and format of the videos.

C/O Evermynd®

Backup slides

Discussion

01 Talent recruitment is the #1 industry job (4.67/5). Does that match your experience, and what would make your community's talent pipeline visible?

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02 Growth is referral-driven, not search-driven. What would make ErUM-Data content easy for you to share within your own networks?

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03 Is video-first realistic for your community? What would lower the barrier to appearing on camera or contributing a tutorial?

---

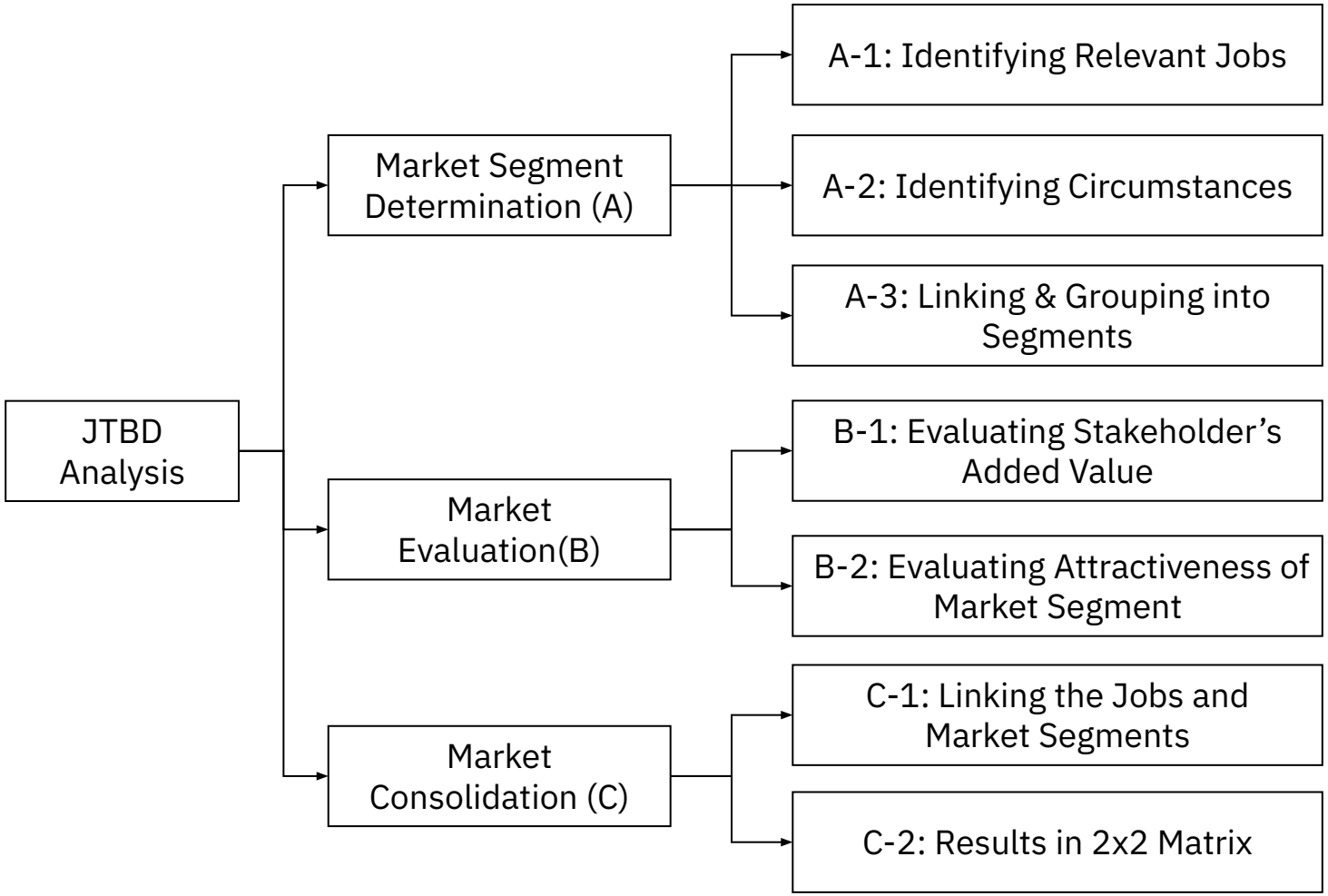
04 S4 (general public) scored lowest in our survey. Is that a genuine blind spot to validate, or a fair signal to deprioritise?

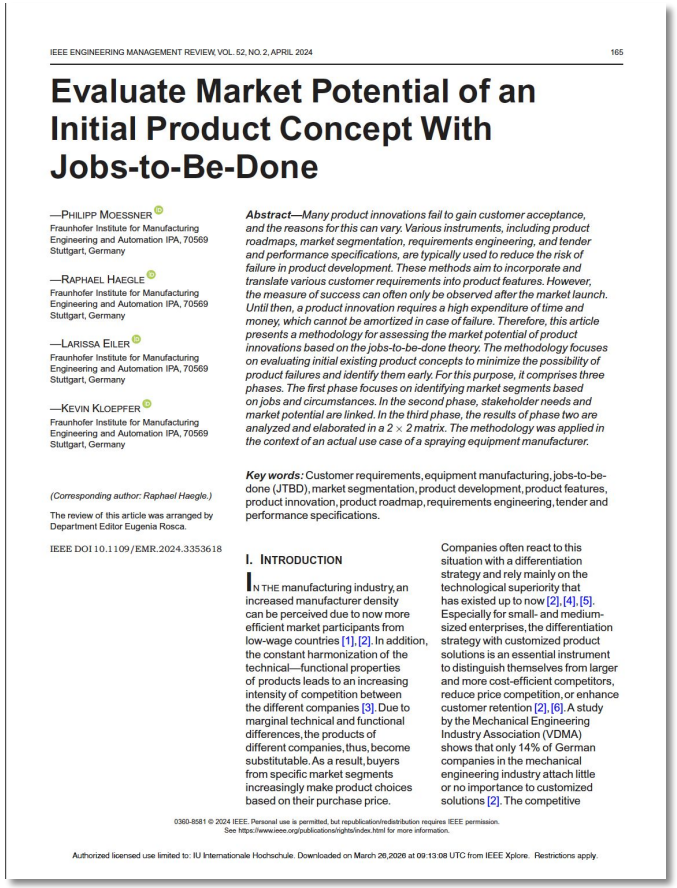
Methodological Framework

Research Methodology: Four Streams, triangulated

	Framework	Type	Details
01	**JTBD Survey**	Primary - Qualitative	• Jobs-To-Be-Done framing (Moessner/Haegle, 2024) • 15 community participants (5-12 May 2026) • 20 jobs x 12 circumstances • Output: 4 validated audience segments
02	**Hypothesis Validation**	Primary - Analytic	• Original assumptions tested against scores • Top-20 job / top-12 circumstances threshold • Confirms, refines or rejects each segment • Surfaces the insider blind spot (S4 General Public)
03	**PESO + Channel Audits**	Primary - Qualitative	• Paid / Earned /Shared /Owned (Dietrich, 2014) • Current comms channels of the community reviewed • Reach, activity, register Output: Where the network stands today
04	**Consumer Insights**	Secondary - Quantitative	• Statista Consumer Insights, March 2026 • German Science/tech enthusiasts • Media use, demographics, attitudes. • Output: External validation of channel approaches

This research was structured across the following phases





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Evaluate Market Potential of an Initial Product Concept With Jobs-to-Be-Done

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***Abstract*—Many product innovations fail to gain customer acceptance, and the reasons for this can vary. Various instruments, including product roadmaps, market segmentation, requirements engineering, and tender and performance specifications, are typically used to reduce the risk of failure in product development. These methods aim to incorporate and translate various customer requirements into product features. However, the measure of success can often only be observed after the market launch. Until then, a product innovation requires a high expenditure of time and money, which cannot be amortized in case of failure. Therefore, this article presents a methodology for assessing the market potential of product innovations based on the jobs-to-be-done theory. The methodology focuses on evaluating initial existing product concepts to minimize the possibility of product failures and identify them early. For this purpose, it comprises three phases. The first phase focuses on identifying market segments based on jobs and circumstances. In the second phase, stakeholder needs and market potential are linked. In the third phase, the results of phase two are analyzed and elaborated in a 2 × 2 matrix. The methodology was applied in the context of an actual use case of a spraying equipment manufacturer.**

Key words: Customer requirements, equipment manufacturing, jobs-to-be-done (JTBD), market segmentation, product development, product features, product innovation, product roadmap, requirements engineering, tender and performance specifications.

I. Introduction

In the manufacturing industry, an increased manufacturer density can be perceived due to now more efficient market participants from low-wage countries [1], [2]. In addition, the constant harmonization of the technical—functional properties of products leads to an increasing intensity of competition between the different companies [3]. Due to marginal technical and functional differences, the products of different companies, thus, become substitutable. As a result, buyers from specific market segments increasingly make product choices based on their purchase price. Companies often react to this situation with a differentiation strategy and rely mainly on the technological superiority that has existed up to now [2], [4], [5]. Especially for small- and medium-sized enterprises, the differentiation strategy with customized product solutions is an essential instrument to distinguish themselves from larger and more cost-efficient competitors, reduce price competition, or enhance customer retention [2], [6]. A study by the Mechanical Engineering Industry Association (VDMA) shows that only 14% of German companies in the mechanical engineering industry attach little or no importance to customized solutions [2]. The competitive

Source: Moessner / Haegle, Fraunhofer IPA - IEEE Engineering Management Review, April 2024.

List of the top 20 jobs

Nr.	Job Description	Ø Score	Validated ✓
J1	Recruit highly qualified junior talent from physics and data science	4.67	✓
J2	Identify technology potentials from basic research at an early stage	4.33	✓
J3	Inspire children and young people for science and technology	4.27	✓
J4	Apply AI/ML algorithms from particle physics to own datasets	4.20	✓
J5	Tap into research expertise for concrete technical problems in day-to-day operations	4.20	✓
J6	Develop proofs of concept for novel analysis methods together with researchers	4.20	✓
J7	Build research partnerships for the development of new products or processes	4.13	✓
J8	Gain access to BMFTR funding and research networks	4.13	✓
J9	Deploy generative AI methods from basic research for own data synthesis	4.13	✓
J10	Experience fascination for the universe and physics	4.00	✓
J11	Evaluate and integrate open-source tools and algorithms from the research community	3.93	✓
J12	Use benchmark datasets from basic research for own model development	3.93	✓
J13	Find reliable science experts as interview sources or conversation partners	3.87	✓
J14	Strengthen one's own credibility through collaboration with research institutions	3.87	✓
J15	Obtain high-quality learning materials on digital research	3.87	✓
J16	Strengthen the company's innovation image through association with cutting-edge research	3.87	✓
J17	Position oneself as an informed citizen on science topics	3.80	✓
J18	Transfer real-time data processing methods from high-energy physics to industrial sensor networks	3.80	✓
J19	Integrate anomaly detection methods from basic research into own quality assurance	3.80	✓
J20	Use simulation models from physics research for own product development or process optimization	3.73	✓

List of the top 12 circumstances

Nr.	Circumstance	Ø Score	Validated ✓
C1	Recommendation by colleagues, community, or network	4.67	✓
C2	First personal contact via event, trade fair, or conference	4.27	✓
C3	Natural sciences university background, not a physics specialist	4.00	✓
C4	Generally interested in tech and science (science podcasts, documentaries, popular science)	3.87	✓
C5	Strategic decision preparation, innovation or partnership strategy	3.80	✓
C6	Technology company, SME or startup	3.80	✓
C7	Professional research with a deadline (article, lesson, podcast episode)	3.73	✓
C8	Concrete operational problem in day-to-day operations, pressure to find a solution	3.67	✓
C9	Data or AI affinity from professional life, no physics expertise	3.60	✓
C10	Actively researched (Google, LinkedIn, trade media)	3.60	✓
C11	Large company or corporation (R&D; department, innovation team)	3.47	✓
C12	School or educational institution	3.27	✓

Details for the Analysis Insights

#	Insight	Data Basis	Framing	Strategic Implication
1	The community's own ranking of public-facing communication reflects a structural blind spot, not low strategic value	Public-facing jobs rank lowest in the dataset (2.53–3.20/5, ranks 16–17 of 17); "no science background" is the single lowest-rated circumstance overall	Insider bias in self-assessment	Retain the public segment in the brief; validate it externally in the next phase
2	Talent recruitment outranks every other industry-facing job and represents an underused communication lever	"Recruit junior talent from physics and data science" is the highest-rated job overall (4.67/5), 0.34 pts above technology scouting (4.33)	Network Value Creation	Make the existing talent pipeline (jobs board, student projects, alumni profiles) visible in industry-facing communication
3	The audience's consistently high science literacy means the communication challenge is narrative depth, not accessibility	"Natural sciences background" ranks 3rd among circumstances (4.00/5); "no science background" ranks last (2.53/5) — a 1.47-pt gap, the largest in the circumstances dataset	Positioning mismatch: storytelling over simplification	Prioritize stronger storytelling and structure over simplifying technical content
4	ErUM's growth channels are dominated by personal referral, indicating a network activation gap rather than a discoverability gap	"Recommendation by colleagues or network" is the top-rated circumstance (4.67/5); "passive discovery via social media" ranks second-to-last (2.60/5)	Community Key Opinion Leaders	Equip existing community members with shareable, referral-ready materials rather than investing in broad-reach visibility
5	SMEs and startups are rated as a more receptive industry audience than large corporations, despite the latter being the assumed primary target	SMEs/startups rank 6th (3.80/5); large corporations rank 11th (3.47/5) — a 5-rank difference	Not only the big guys	Design industry-facing formats around SME entry points (PoCs, direct expert access) rather than large-company case studies
6	Industry's interest in collaborative formats is as strong as its interest in pure knowledge access, pointing to an underdeveloped co-creation offer	"Develop PoCs together with researchers" scores 4.20/5 (rank 6), statistically tied with "apply AI/ML to own datasets" and "tap into research expertise" (both framed as one-way access jobs)	Value Co-Creation	Build structured collaboration formats (PoC matchmaking, problem sessions, hackathons) serving operational, strategic, and talent goals simultaneously

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