

GENERATIONAL ALIGNMENT × SCIENCE COMMUNICATION

When Generations Complete Each Other, **Science Wins.**

*A multi-generational strategy for science communication
in a moment when it matters most.*

7

Generations
to mobilize

14 pt

Drop in science
confidence since
2020*

\$5B+

Research grants
cut in 2025**

* Pew Research Center 2024 ** Science News / Grant Witness 2025



Sources & Data

All claims in this presentation are supported by peer-reviewed research, institutional reports, or verified journalism.

TRUST IN SCIENCE

- Pew Research Center (2024). Public Trust in Scientists and Views on Their Role in Policymaking. 87% confidence in 2020 → 76% in 2024 (14-point decline).
- Pew Research Center (2023). Americans’ Trust in Scientists Continues to Decline. Great deal of confidence: 39% (2020) → 23% (2023).
- Lupia et al. (2024). Trends in U.S. Public Confidence in Science. PNAS. doi:10.1073/pnas.2319488121
- NSF National Science Board (2024). Science & Engineering Indicators: Public Perceptions, Awareness, and Information Sources.

FEDERAL FUNDING CUTS

- Science News / Grant Witness (2025). NIH and NSF Cuts 2025 Data. Over 5,300 grants totaling >\$5B frozen or terminated.
- Association of American Universities (2025). White House Proposes Steep Cuts to Science and Education Funding. NSF −56%, NIH −39% in FY2026 proposal.
- C&EN / American Chemical Society (2025). A Huge Rupture in Everything: U.S. Science Faced Major Upheaval in 2025.
- American Physical Society / FYI (2026). NSF Lags in Grant Awards and Trump Again Proposes Deep Cuts.

SCIENCE LITERACY & PISA

- OECD PISA (2022, published Dec. 2023). U.S. ranked 10th in science among 81 education systems. NCES / U.S. Dept. of Education.
- National Science Board (2024). Science & Engineering Indicators: K–12 Education. COVID-19 set U.S. math achievement back ~20 years.
- NSF NCSES (2024). STEM Education data: Master’s degree enrollment in science, engineering & health up across 2020–2024.

GEN Z & STEM ENGAGEMENT

- Gallup / Walton Family Foundation (Dec. 2023). Voices of Gen Z: Perspectives on STEM Education and Careers. 75% of Gen Z interested in STEM; only 29% list it as first-choice career.
- Florida Institute of Technology (2024). How TikTok STEM Creators Are Shaping Gen Z Majors. 44% of Gen Z say TikTok STEM creators influenced their STEM major choice.
- Gounaridis & Newell (2024). Climate skepticism and vaccination rates. Scientific Reports. Analysis of 7.4M X posts.



THE SCIENCE CRISIS

- Federal research funding slashed (NSF, NIH, NOAA, USDA)
- Career scientists displaced
- Peer-reviewed consensus contradicted by policy
- Vaccine hesitancy & climate denial mainstreamed
- U.S. science literacy below peer nations

The Moment Demands a Multi-Generational Response



Trust eroded unevenly

Different generations lost science trust through different vectors.



Information ecosystems are siloed

No single channel reaches all generations. Science must be everywhere.



Communicators already exist

Every generation has trusted voices. Deploy them — don't rebuild them.

"Science doesn't need fans. It needs informed citizens — in every generation."

Every Generation — A Communication Asset

Each era trained its generation to communicate differently. Science needs all of it.

GEN		TRAINED FOR		STRENGTH	BLIND SPOT
Silents		Endurance		Institutional credibility	<i>Resists social media</i>
Boomers		Institutions		Mainstream public authority	<i>One-way broadcast</i>
Gen X		Self-reliance		Skeptic translator	<i>Cynicism vs. consensus</i>
Xennials		Hybrid adapt.		Bridge communicator	<i>Spread thin</i>
Millennials		Credentials		Network amplifier	<i>Preaches to converted</i>
Gen Z		Speed		Viral visual storytelling	<i>Depth vs. engagement</i>
Gen Alpha		AI co-creation		Native digital builder	<i>Algorithm dependence</i>

The Multi-Generational Strategy



The science doesn't change. The audience does. The communicator must too.

The Multi-Generational Strategy



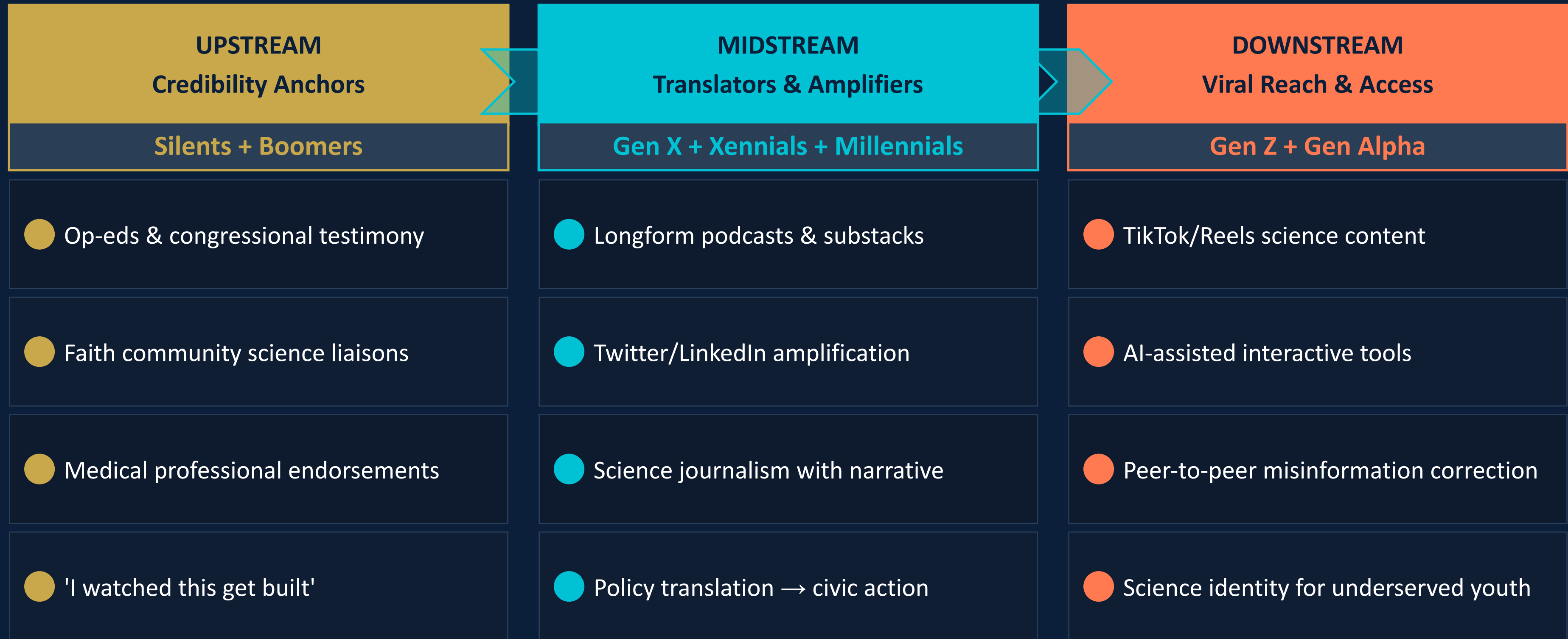
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The Multi-Generational Strategy



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SILENTS & BOOMERS

1928 – 1964

"We built the institutions that made the science."

trained for. Endurance + Institutional trust

channel. Journals, broadcast TV, town halls, op-eds

produced. The 20th-century STEM infrastructure

Superpower: Credibility no digital creator can replicate

Science Communication Role

1

They ARE the credibility infrastructure.

The generation that built NIH, NASA, and NSF — their voices carry *institutional weight* in boardrooms, hearings, and faith communities.

2

Custodians of the long view.

They can say what data can't: 'I watched this get dismantled.' That eyewitness frame is more persuasive than any statistic.

3

The town hall is still their room.

School boards, congressional hearings, faith spaces — Boomer-trusted arenas where science needs credible advocates.

"They built it. Now they must defend it — and hand it forward."



GENERATION X

1965 – 1980

"We survived the collapse of institutions — and still trust evidence."

trained for. Self-reliance + Skepticism

channel. Podcasts, longform blogs, investigative journalism

produced. The original science skeptic-translator cohort

Superpower: Anti-spin credibility with distrustful audiences

Science Communication Role

1 The anti-spin advantage.

'I'm not a fan of institutions, but the data is real' — that Gen X sentence lands where government messaging never will.

2 Longform is their native format.

Podcasts and substacks allow science to go deep — beyond soundbites into mechanism and nuance, where trust actually lives.

3 Skeptic whisperers.

The most reachable anti-science audiences aren't ideologues — they're burned by institutions. Gen X speaks that language fluently.

"Distrust everything — except the data."



XENNIALS

1977 – 1983

"We remember both the library and the search engine."

trained for. Hybrid adaptation — analogue childhood, digital adulthood

channel. Social media + longform; fluent in both

produced. First sci-comm cohort bilingual across media eras

Superpower: Bridging pre-digital credibility with digital reach

Science Communication Role

1 The bridge generation is a superpower.

Xennials can take a peer-reviewed paper, make it a viral thread, and link to the primary source — rigorous AND accessible.

2 Bilingual across science cultures.

They validate Gen X cynicism while channeling Millennial urgency — uniquely suited to building multi-generational coalitions.

3 The analogue memory matters.

Remembering science before the internet gives Xennials a restoration frame younger generations can't access alone.

"Born between eras, called to translate between worlds."



MILLENNIALS

1981 – 1996

"We use knowledge as a weapon against injustice."

trained for. Credentials + Optimization + Purpose

channel. Twitter/X, LinkedIn, Substack, TEDx

produced. Science influencer economy + science policy advocates

Superpower: Network amplification and purpose-framing

Science Communication Role

1 Science as a values statement.

Millennials connected climate data to environmental racism and funding cuts to community harm — activating audiences older formats never reached.

2 The credentialed communicator cohort.

A disproportionate share of working scientists, science journalists, and policy professionals — activated and networked.

3 Distribution is their native contribution.

In an era of algorithmic suppression of expertise, Millennial networks are strategic infrastructure for science communication.

"They made science personal. Now they must make it inescapable."



GEN Z

1997 – 2012

"We make science go viral before you finish the abstract."

trained for. Speed + Multimodal skill + Identity

channel. TikTok, YouTube Shorts, Instagram Reels, Discord

produced. Visual-first, native-digital science communication

Superpower: Viral reach and authentic science storytelling

Science Communication Role

1

TikTok science is a gateway, not a gimmick.

44% of Gen Z report that TikTok STEM creators influenced their choice of STEM major. (Florida Tech, 2024)

2

They communicate WITH science, not just ABOUT it.

Gen Z creators share experiments in real time, model scientific uncertainty publicly — more effective than most textbooks.

3

Authentic skepticism as a feature.

Their distrust of credentials means they interrogate science on camera — and when directed at misinformation, that's exactly what's needed.

"Speed belongs to the scientific record."



GEN ALPHA

2013 –

"We will build with machines what others could only imagine."

trained for. AI co-creation + Collaboration + System fluency

channel. AI tools, interactive media, gaming platforms

produced. AI-native interactive science experiences

Superpower: Immersive, personalized science at scale

Science Communication Role

1

They inherit the infrastructure.

Whatever systems Millennials and Gen Z build, Gen Alpha will operate. Investing in their science literacy now has a 30-year return.

2

AI-native communication is a revolution.

Interactive simulations, AI-assisted explainers, personalized learning — at scales no previous generation imagined.

3

They need the long memory — now.

Tools without wisdom amplify noise. Gen Alpha needs the deposit of every preceding generation before they build what comes next.

"Build with machines — but build for truth."

The Multi-Generational Strategy



The science doesn't change. The audience does. The communicator must too.

THE CALL TO ACTION

Science doesn't need
defenders in one generation.

It needs ambassadors
in every generation.



TRUST THE RECORD

Every generation defends peer-reviewed science
in its own language and channel.



TRAIN ACROSS ERAS

Each generation deposits science literacy into the
next. The chain must not break.



REACH THE UNREACHED

Don't preach to the converted. Reach the
generation that gave up — through the voice
they trust.

"We are not competing generations. We are completing generations. And together — ALL things work for the good of science."

