DASH-IF June 7, 2024

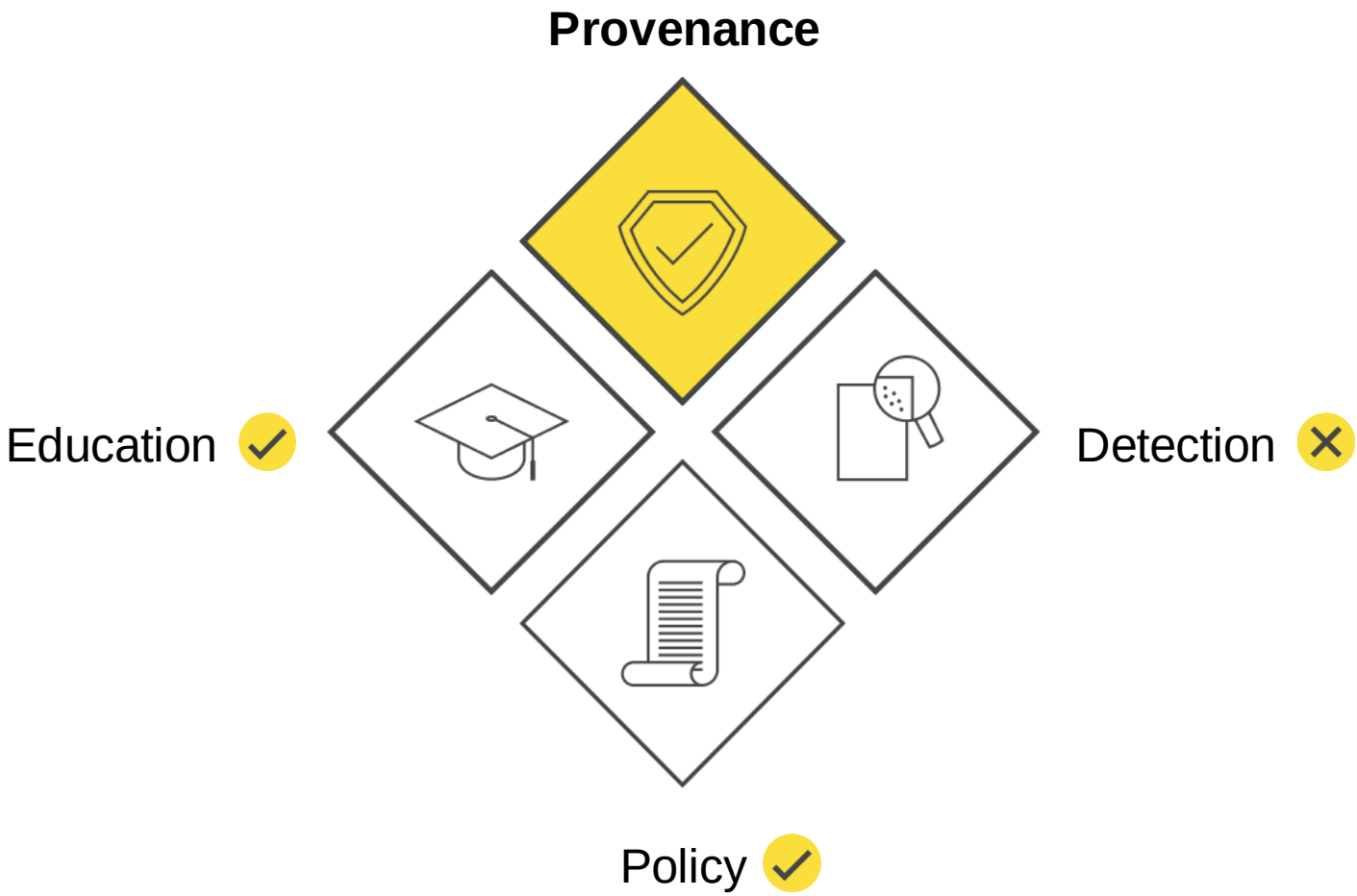
Content Authenticity Initiative

C2PA: Authenticity in the Age of AI

Andy Parsons, Adobe

Adobe

Pillars of Transparency and Authenticity



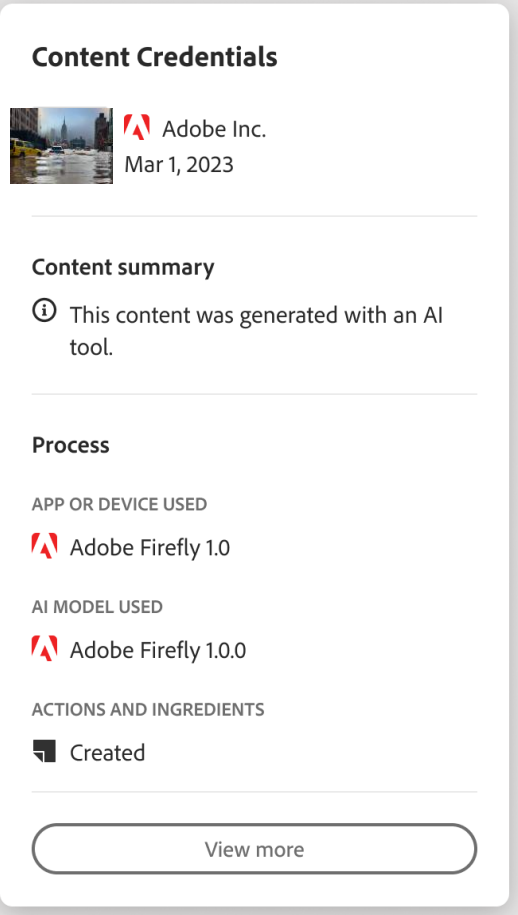
Provenance

The basic trustworthy facts about the origins of a piece of digital content (image, video, audio, document)

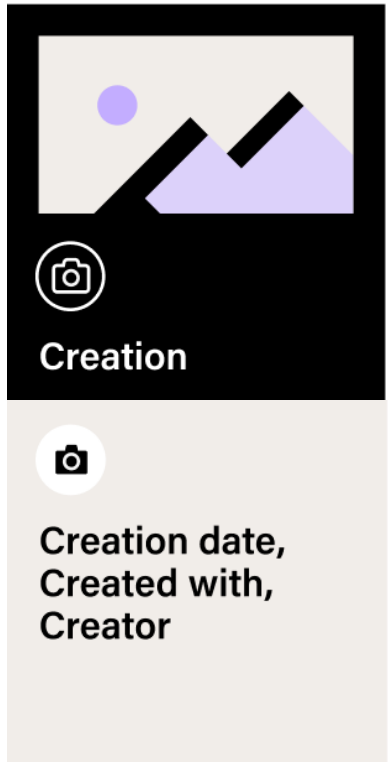
content credentials

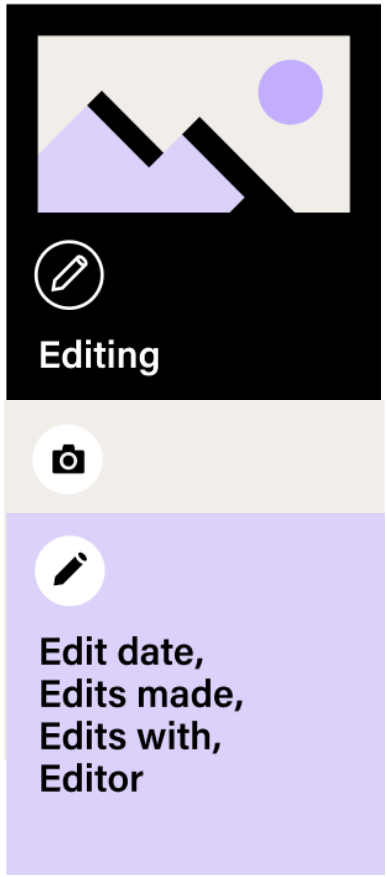
What are Content Credentials?

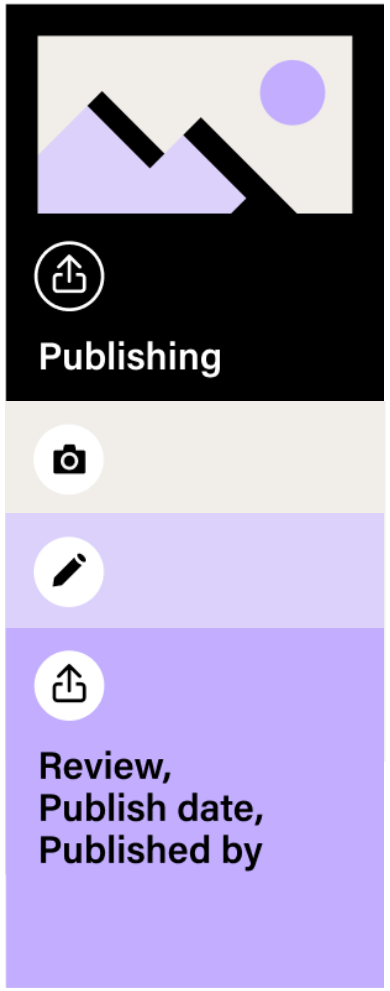
- A new kind of **metadata** for images, audio, video (including streaming and live)
- **Context** attached to content
- Provable evidence as to **what** media is and how it was made.
- A vehicle for authentic storytelling through **transparency**
- A way for creators and companies to achieve **attribution** for the content they produce (using C2PA extensions)
- A foundation for consumers to make informed **trust** decisions

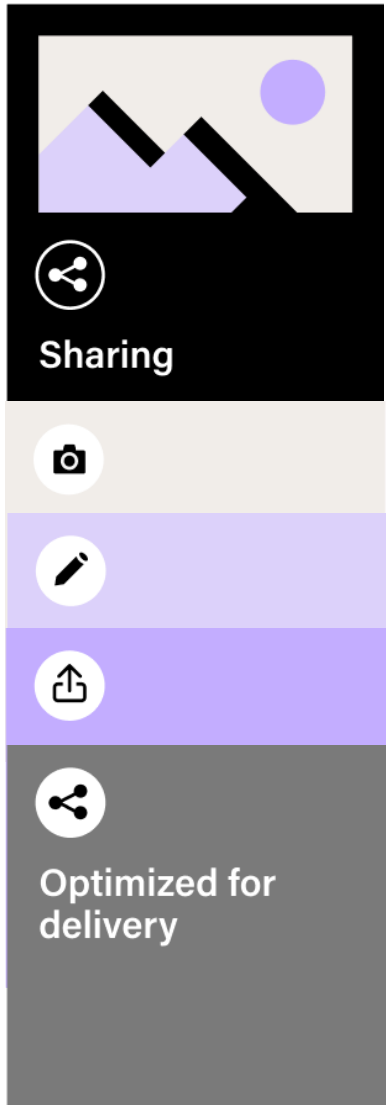


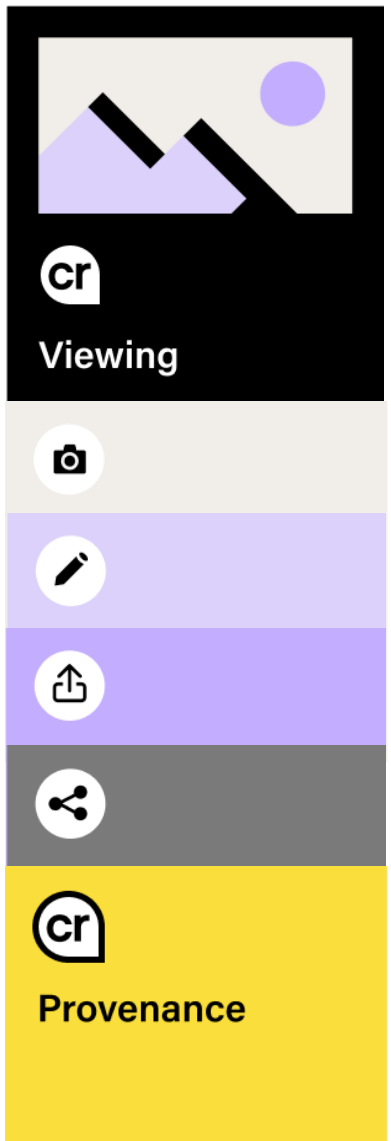
Content Credentials











Verify for Yourself with Content Credentials

CONTENT INGREDIENTS

Select a file to inspect its content credentials. You can also compare the content credentials of two files.

FILE NAME
snowy-taj-mahal.jpg

FILE NAME
AdobeStock_130860698.jpeg

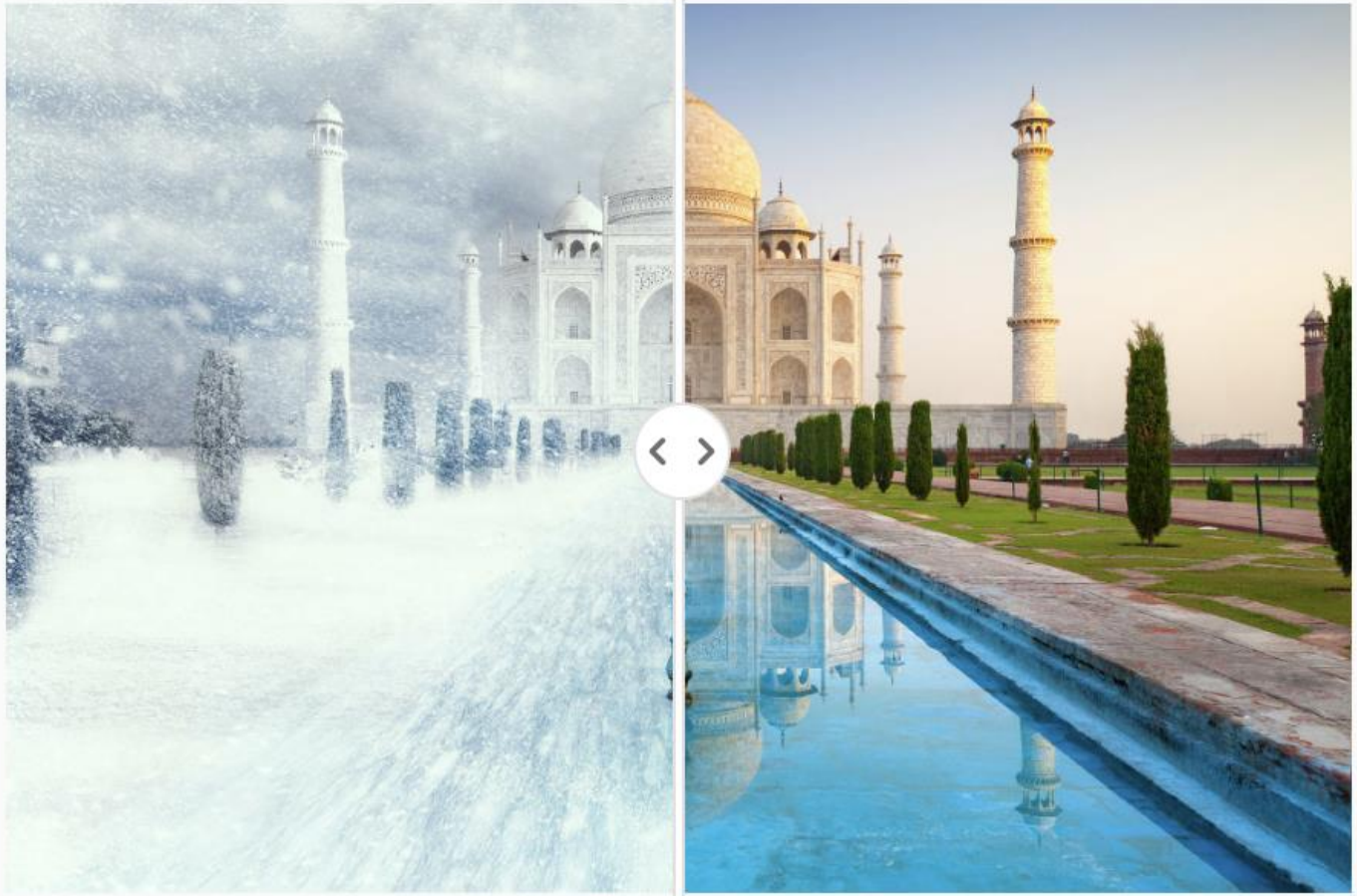
FILE NAME
Untitled Image

FILE NAME
AdobeStock_376129769.jpeg

FILE NAME
AdobeStock_120014104.jpeg

FILE NAME
AdobeStock_273756219.jpeg

Choose comparisons



Content Credentials

snowy-taj-mahal.jpg

SIGNED BY
Adobe Inc.
Feb 3, 2023 at 7:44 AM PST

PRODUCED BY
Pia Blumenthal

SOCIAL MEDIA
@Pia Blumenthal
@pia b

PRODUCED WITH
Adobe Photoshop 24.1.1

EDITS AND ACTIVITY
AI tools
Edited with artificial intelligence or machine learning tools

Color adjustments
Changed tone, saturation, etc.

Combined assets
Composited 2 or more assets

Imported assets
Added images, videos, etc.

Content Authenticity Initiative | Adobe

What must the solution have?	How Content Credentials solves
Tamper-evident connection to content	Cryptographic binding to pixels, frames, fragments
Resiliency	Content Credentials Cloud and fingerprinting
Privacy	Redaction
Trust	PKI, signatures and certs, not (necessarily) blockchain
Standards	C2PA JDF/Linux Foundation
Identity	Verifiable Credentials, KYC, social media
Outstanding UX	C2PA UX TF
Implementation ease	CAI open-source tools
Community of adopters	CAI Discord, events, showcases

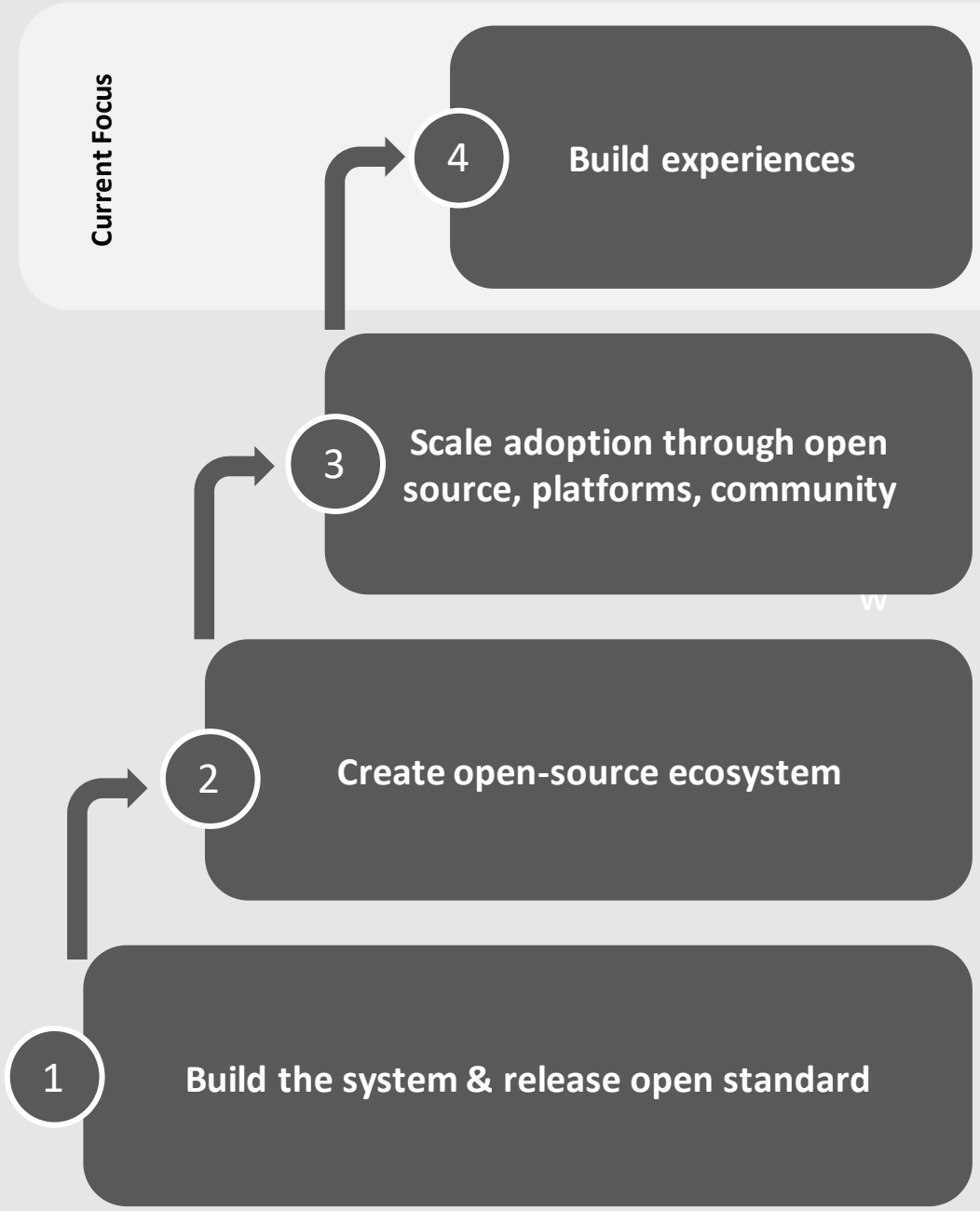
Coalition for Content Provenance and Authenticity (C2PA)

- Non-profit, run in the Linux Foundation
- Steering Co: Adobe, BBC, Google, Intel, Microsoft, Publicis, Sony, Truepic
- Spec and guidance available now, v2.0
- Addresses images, video, audio, documents
- Threats and harms + UX conventions

The Coalition for Content Provenance and Authenticity (C2PA)

- Standards development organization (SDO)
- JDF within Linux Foundation
- v1.0 C2PA Specification released Jan 2022

Content Credentials everywhere.



- Focus on **Adoption**
- **Support ecosystem** services like fingerprinting and manifest clouds
- **Build** creator, publisher, end-user value

- **Collaborating on** solutions: news, mobile, AI
- **Focusing on** gaining ubiquity across the media ecosystem through simplicity, partners, and community

- **Developed** CAI implementations, SDKs and examples
- **Focused on** learning and usability

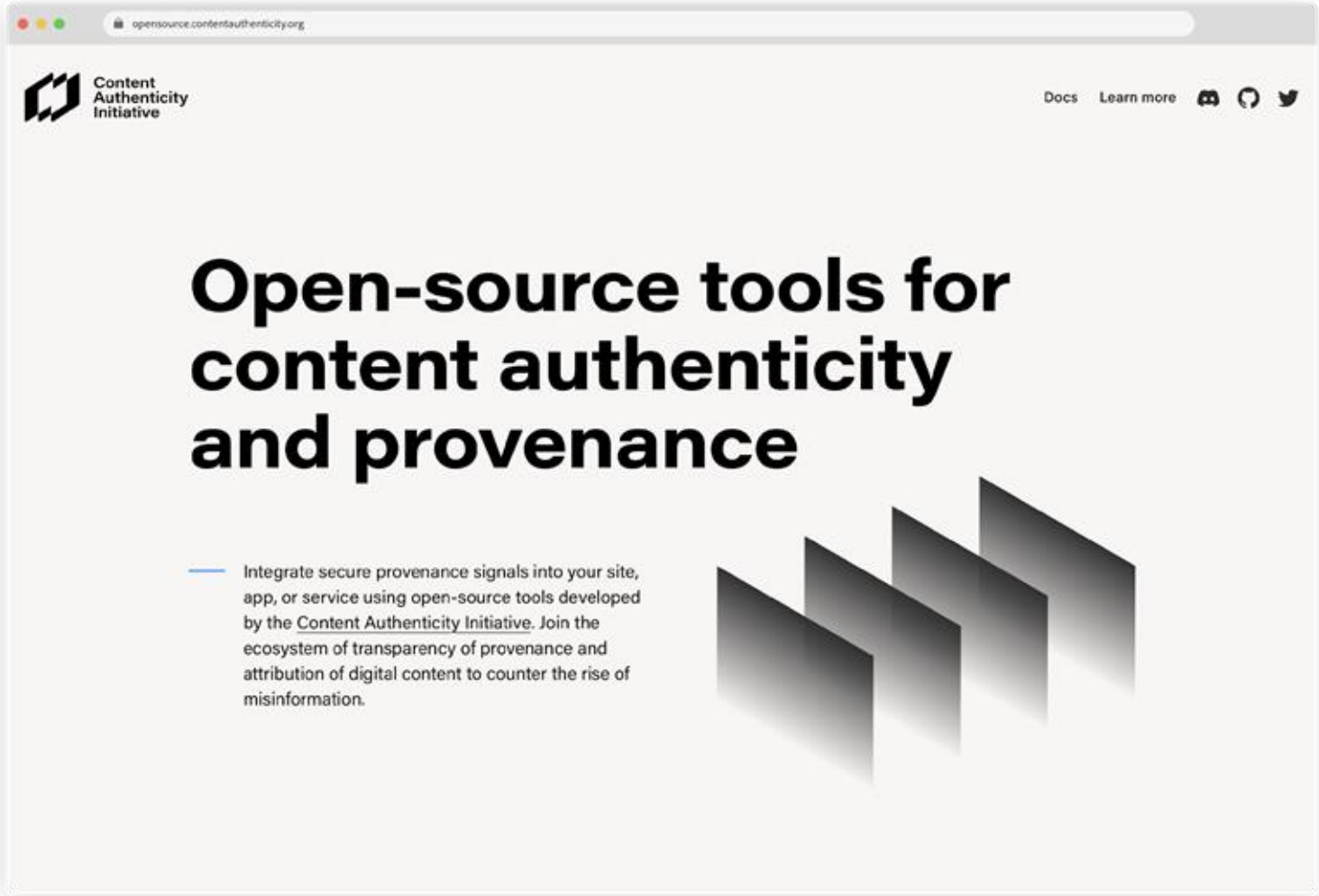
- **Developed** C2PA standard for provenance and authenticity
- **Focused on** rapid spec iterations and reference implementations

The CAI Open-source toolkit for C2PA

JavaScript SDK
Develop rich, browser-based experiences with content credentials.

C2PA Tool
Create, verify and explore content credentials on the command line.

Rust SDK
Customize applications across desktop, mobile, and services to create, verify, and display content credentials via our Rust library.



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