

Solution Blueprint

Summary for Decision Makers

What: Scalable computer vision media processing pipeline tailored to media providing or processing platforms of every size that runs entirely in your environment (on-premise or managed private cloud).

Why it matters: Understanding of video data to automate work, reduce costs, and adhere to platform and legal policies — with strict data sovereignty.

Who it's for: **Media Platform Providers** (livestream & VOD), **UGC platforms**, and **Anti-Piracy Vendors** that need private-by-design processing and predictable scaling, **Streaming Technology Providers** that serve a wide range of customers and would like to provide content moderation as a service.

Key Guarantees

- **Data sovereignty:** All processing happens in customer-controlled infrastructure, no third party services.
- **Customization:** Adaptation of the Noxovision service to your needs and rulesets by us.
- **Predictable spend:** Per-instance licensing aligned to capacity.

Outcomes

- **Discovery & Monetization:** Auto-tagging and categorization improve search, surfacing, and content utilization.
- **Compliance:** Automatically ensure creator identification and rights attestation; prevent platform misuse; detect and flag illegal or policy-violating content in near real-time.
- **Brand Protection & Anti-Theft:** Robust semantic fingerprinting enables finding leaked content even after heavy modification (cropping, mirroring, re-encoding).
- **Cost & ROI:** Automation cuts editing time and review effort; instance-based pricing avoids unpredictable per-call API costs.

Typical Pain Points & Solutions

1) Automatic Identification and Creator Matching

Pain: Media platforms operate under strict identity-verification requirements. Account misuse (e.g., account selling, sharing, or impersonation) creates a high risk of non-compliance, financial penalties, and forced platform downtime.

Our Approach: We implement a *creator whitelisting* system. Creators complete a one-time registration and verification flow. A robust face-recognition engine links each verified identity to a specific account ID, and only creators whose live identity matches their account are automatically whitelisted; all mismatches or unverified faces are flagged for review.

Business Impact: Lower regulatory and compliance risk; fewer takedowns and audits; faster, more reliable creator verification; fewer escalations to legal and trust & safety teams.

2) Automatic Keyword Generation and Segment-Wise Tagging

Pain: Creators have limited insight into the relevance of categories, which leads to a loss of tagging quality and tagging spam. Semantic search and discovery suffer. Usually, creators are not able to provide structured metadata about interesting parts and highlights in videos.

Our Approach: Our system can process the entire media portfolio of a creator and generate creator profiles. Media can be tagged and segmented with a comprehensive taxonomy of content categories based on their relevance. This enables precise matching during semantic discovery, depending on search terms, user preferences, and media content.

Business Impact: Users receive more relevant content, better balance of audience engagement among creators, higher retention, and greater revenue for creators and the platform.

3) Automatic Compliance Assertion

Pain: Manual verification and moderation are slow, labour-intensive, inconsistent, and risky. High-stakes gaps (identity/consent, age validation, illegal content) create exposure and can cause sudden downtime.

Our Approach: A *policy engine* evaluates per-asset signals (tags, scene boundaries, detected classes) against versioned, declarative rules. Core capabilities include:

- **Flexible, customizable policies:** Pluggable rules for *age validation* (age-estimation signals, ID checks, whitelisting), *illegal content* (e.g., violence, blood, drug use), *misuse* (ID anomalies, behavior drift).
- **Payment & platform integrity:** Detect payment circumventions (off-platform redirections, prohibited signs or displays with payment addresses).
- **Routing & evidence:** High-risk items go to human-in-the-loop queues with evidence packs (frames, timestamps, probabilities) and full audit logs.

Business Impact: Reduced compliance exposure and takedowns; faster SLAs; fewer escalations; minimized risk of costly platform downtime.

4) Enhanced Semantic Media Fingerprinting

Pain: Traditional hash-based fingerprinting fails against re-encoding, cropping, mirroring, or cam-recorded leaks. Piracy detection becomes a cat-and-mouse game where minor video alterations bypass detection filters.

Our Approach: We employ *generative semantic embeddings* that represent the content and context of a video, not just its pixel values. This approach is highly resilient to heavy modifications including cropping, color shifts, and re-encoding. It allows for "fuzzy" matching of scenes even if they have been altered.

Business Impact: Higher detection rates for leaked content, automated takedowns of derivative works, and robust evidence for legal action giving you the upper hand in IP protection.

5) Automatic Preview Generation

Pain: Editors or creators spend time manually cutting previews; quality varies; policy-safe previews are hard to standardize.

Our Approach: A *rules-driven preview generator* selects high-salience segments using signals from tagging, scene boundaries, action recognition, and high-entropy segments. We support a wide range of content categories and more can be added to suit your requirements. Rules are declarative and versioned, so non-engineers can iterate safely.

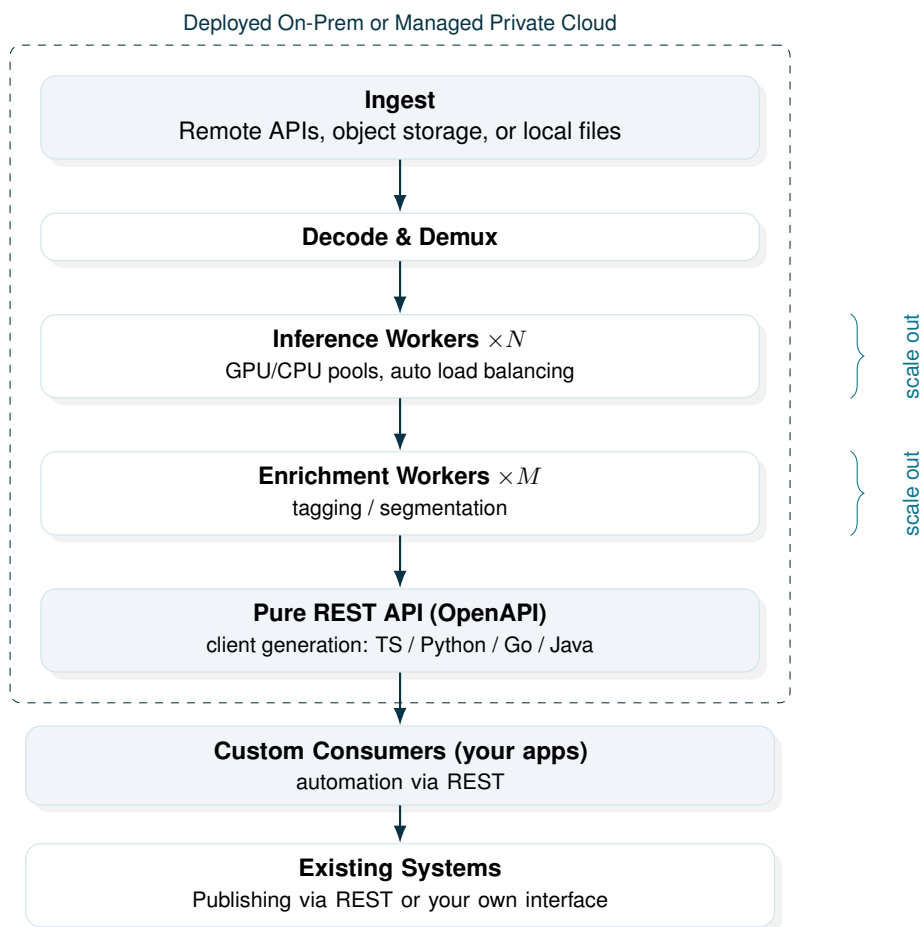
Business Impact: Faster publishing, consistent quality, and policy-safe teasers and thumbnails.

Compatibility with Existing Models & Workflows

We customize the pipeline to your needs. Your existing models can be utilized directly and we provide **extensive support and customization before roll-out**. Gradual integration is possible: start with a minimal path and extend stage-by-stage. For more complex integrations into existing systems, we can undertake the work on a time (hourly) basis.

- Containerized processors (bring your models) with defined I/O contracts.
- Versioned processor registry; canary/gradual rollout.

How It Works (at a glance)



Scalability & Load Balancing

Own scaling model & scheduler. Noxovision uses a branching, stage-wise scaling model with load balancing across worker pools. You scale *only* the hot stages (decode, inference, enrichment).

Designed for volume. Architected to handle **thousands of videos per day** across live and VOD workloads, with automatic backpressure, queueing, and quota-aware scheduling to protect SLAs.

Security & Data Handling

No data stored by noxodev IT. Processing runs entirely in your environment; data does not leave your infrastructure. Logs/metrics/outliers remain within your stack unless you choose otherwise. Legal overhead is minimized since noxodev IT is not a data host or sub-processor of record in typical deployments.

Integration (Low Friction)

- **Professional Services:** Our technical experts are available to support your team with API ingestion and the build and deployment of **custom applications on top** like dashboards, CMS plug-ins, automation processes and more. These professional services are offered on a time-and-materials basis, billed at standard engineering rates, and can be tailored to your project scope and delivery timeline.
- **Pure REST API** with an **OpenAPI** definition — generate clients in TypeScript, Python, Go, Java, and more.
- **Preview Rules** are **human-readable configs**: create/list/update versions, dry-run, and attach to pipelines.

Pricing & Deployment

Pilot (1–3 months): One-time integration fee 180€ + 250€/month to cover pilot operating costs. Access to all enterprise features. Refund of integration fee after production enrollment.

Production: Per-instance fee based on enabled features, scaling with the number of GPU servers.

Phases

Pilot (1–3 months). Work closely with your technical point of contact to customize the pipeline; run integration tests and validate KPIs.

Rollout. We provide instance management: updates, uptime commitments, and server environment management.

Next Steps: Contact our technical team to analyze your specific use-cases. We will provide a detailed use case optimized compute analysis to determine the exact number of instances required for your SLA goals.

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Appendix — Technical Details (excerpt)

A. Example REST Video Analysis Result

```
{
  "scenes": [
    {
      "category": "cooking",
      "start_seconds": 0,
      "end_seconds": 11.5,
      "probability": 0.85,
      "relative_activity": 6,
      "age": [
        26
      ],
      "critical": false
    },
    {
      "category": "no_person",
      "start_seconds": 15,
      "end_seconds": 23,
      "probability": 0.75,
      "relative_activity": 1.2,
      "critical": false
    }
  ],
  "structure": {
    "non_semantic_scenes": [
      {
        "start_seconds": 0,
        "end_seconds": 14
      },
      {
        "start_seconds": 14,
        "end_seconds": 23
      }
    ]
  }
}
```

B. Critical Section Flagging (Gatekeeping)

```
{
  "critical_sections_flaggers_configs": [
    {
      "critical_category": "violence",
      "negating_tags": [
        "no_person"
      ],
      "start_sample_size": 5,
      "sampling_strategy": "fartherest_first",
      "flagger_config": {
        "class_tag": "violence",
        "strategy": "any",
        "n": 100,
        "threshold": {
          "min": 0,
          "max": 1,
          "positive_ranges": [
            {
              "start": 0.5,
              "end": 1
            }
          ],
          "negative_ranges": [
            {
              "start": 0,
              "end": 0.5
            }
          ]
        }
      },
      "missing_policy": "unknown"
    }
  ]
}
```