



Content Production, Campaign Management, and Digital Media

Generative AI for Advertising and Digital Media

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Abstract

This paper examines how generative AI can be integrated into the advertising-production cycle, from brief analysis and the generation of creative directions to copywriting, visual description, review, delivery, and archiving. The proposed model treats AI as a controlled production partner rather than a substitute for human creative judgment.

The study applies a design-science approach to construct a workflow model that connects structured inputs, brand context, language and cultural rules, and human-review stages. It draws on empirical evidence indicating that generative AI can improve the speed and quality of selected tasks, while potentially reducing output diversity when human involvement is weakened during early ideation (Noy & Zhang, 2023; Doshi & Hauser, 2024).

The study proposes a five-stage framework: brief structuring, alternative generation, multi-criteria evaluation, legal and cultural review, and learning from approved outputs. It also defines indicators for cycle time, revision rate, idea diversity, brand alignment, rights protection, and traceability.

Keywords

Generative AI, advertising, digital media, human-AI co-creation, output engineering, Arabic content, Saudi identity, intellectual property.

Study scope: An applied conceptual study using a generic advertising-agency operating model without naming an organization or using client data. The focus is governed production and accountable human review.



Study Profile and Scientific Contribution

Submission readiness: This edition has been revised as an applied conceptual study suitable for scholarly submission, with an explicit methodology, stated limitations, and in-text citations in APA 7 style. It does not claim unmeasured experimental results; instead, it presents a design model that can be tested in a field setting.

Item	Description
Study type	Applied conceptual research based on Design Science Research.
Central problem	Individual and fragmented use of content-generation tools without connecting them to briefs, brand identity, review, rights, and decision records.
Original contribution	A governed creative-production model balancing generation speed, idea diversity, cultural identity, intellectual-property rights, and human accountability.
Unit of analysis	The journey of producing an advertising asset or digital campaign from brief to approval and archiving.
Verifiability	The model can later be measured through pre-defined operational, quality, and governance indicators.
Publication language	English, with Arabic contextual terminology and international and Saudi references.

Scientific and Applied Value

Creative contribution

Transforms generative AI from a producer of generic alternatives into an assistant operating within a specific brand, channel, and audience context.

Operational contribution

Reduces repeated data entry and connects versions, revisions, approvals, and decisions within one workflow.

Governance contribution

Adds review gates for identity, culture, accuracy, rights, privacy, and personal data.

Local contribution

Defines practical requirements for Arabic content and the Saudi context rather than assuming that model outputs are culturally neutral.



Introduction

The advertising and digital-media sector is undergoing rapid change as channels multiply and demand increases for renewed, personalized content. In Saudi Arabia, this transition intersects with the expansion of the digital economy, major events, and emerging sectors, increasing the need for fast production that still preserves language, identity, and trust. Experiments on knowledge-work tasks indicate that generative AI can improve productivity and the quality of some outputs, particularly for less-experienced users (Noy & Zhang, 2023).

Faster production, however, does not necessarily mean greater creative value. An empirical study found that access to AI-generated ideas improved ratings of individual stories but reduced collective diversity across outputs (Doshi & Hauser, 2024). An organization may therefore produce polished content quickly while still generating campaigns that are repetitive, generic, or detached from the brand's character.

This study argues that the appropriate response is neither to prohibit the tools nor to release them without controls. The alternative is to design a collaborative production process that preserves the human role in problem definition, idea formation, selection, and accountability. Guidance from SDAIA and NIST likewise emphasizes responsible use, output verification, data protection, and the management of generative-AI risk (Autio et al., 2024; Saudi Data & AI Authority, 2024).

Central principle: AI expands the space of alternatives, while people remain accountable for meaning, taste, context, and the final decision.



Research Problem and Applied Gap

Advertising teams use multiple tools to generate text, imagery, and video, yet these tools are often used outside the operating workflow. Brief information is copied manually, output versions are lost, and teams cannot reliably identify the source of an idea, the tool's conditions, or the reason one output was approved while another was rejected. The result is a combination of quality and similarity risks, brand inconsistency, client-data exposure, and unclear rights.

The applied research gap is the absence of a model that links generation to the stages of advertising production through measurable criteria. Writing a "good prompt" is not enough. Output quality depends on the brief, brand context, approved style examples, rejection rules, source material, and evaluation method. Intellectual-property protection also requires a review of terms of use, human contribution, brand elements, and reference materials (WIPO, 2024).

Research Questions

- Which advertising-workflow stages create the greatest value when supported by generative AI?
- How can brief, brand, and audience elements be converted into a structured generation context?
- How can diversity, originality, and cultural suitability be preserved in generated outputs?
- Which review gates are required for accuracy, rights, data, culture, and brand identity?
- How should impact be measured without reducing success to production speed alone?



Objectives

- Build a collaborative creative-production model for people and AI.
- Define output engineering as a system of data, rules, and evaluation rather than prompt wording alone.
- Identify high-value and lower-risk use cases.
- Formulate a review matrix for identity, culture, accuracy, and rights.
- Provide testable productivity, creativity, and governance indicators.

Significance

Advertising affects how sectors reach audiences, build trust, and explain products and services. Improving production is therefore not limited to reducing cost; it also concerns communication quality and the representation of culture and language.

The study offers a framework relevant to agencies, public entities, companies, and content teams that seek to use generation while preserving professional accountability.

Study Boundaries

Boundary	Definition
Method	A conceptual design that does not measure a live campaign or actual return on investment.
Content	Focuses on text, ideas, visual description, and review management rather than training a foundation model.
Rights	Provides administrative controls and does not constitute legal advice.
Context	The applied case is generic, adaptable, and does not represent a named organization.



Methodology

The study uses Design Science Research to construct a testable operating model. It begins by analyzing the advertising-production journey and identifying sources of waste and risk. It then reviews empirical evidence concerning generative-AI productivity and creativity, together with formal governance and intellectual-property frameworks. These findings are translated into design requirements, an applied interface, and an evaluation framework.

Analytical Steps

- Decompose the journey into brief, directions, copy, visual description, review, approval, and archiving.
- Identify human decisions that should not be delegated: idea meaning, cultural sensitivity, and final approval.
- Identify tasks suitable for support: summarization, alternatives, rewriting, channel adaptation, and checklists.
- Connect risks to preventive, detective, and corrective controls in line with the NIST AI RMF.
- Define before-and-after indicators for a future field test on an actual sample.

Methodological Integrity

Numbers shown in the interface are visual examples only. No increase or reduction is attributed to the platform before a documented experiment is conducted. The phrase "expected analytical outcomes" is used instead of "results" when no field data are available.



Theoretical Framework: Human-AI Co-Creation

Advertising creativity connects a commercial objective with an audience, channel, and cultural context. Generative AI is effective at producing alternatives and transforming formats, but it does not possess social responsibility, lived experience, or commitment to a brand. The relationship should therefore be designed as co-creation: people define the problem and constraints, the system generates alternatives, and people test meaning, distinction, and impact.

Evidence indicates that generative AI can improve the speed and quality of some tasks, but collaboration design affects diversity and satisfaction. When people participate early in framing the idea and creative direction, content is more distinctive than when they simply approve a completed output (Hosanagar & Ahn, 2024).

Creative stage	Human role	AI role
Problem definition	Set the objective, audience, and core truth.	Summarize inputs and detect missing information.
Alternative expansion	Define initial angles and exclusions.	Propose multiple directions and formats.
Selection	Evaluate the idea, originality, and suitability.	Compare alternatives against declared criteria.
Development	Add judgment, narrative, and local language.	Draft versions for channels, formats, and lengths.
Review	Approve accuracy, rights, identity, and context.	Apply checklists and detect contradictions.



Governed Creative-Production Platform Interface

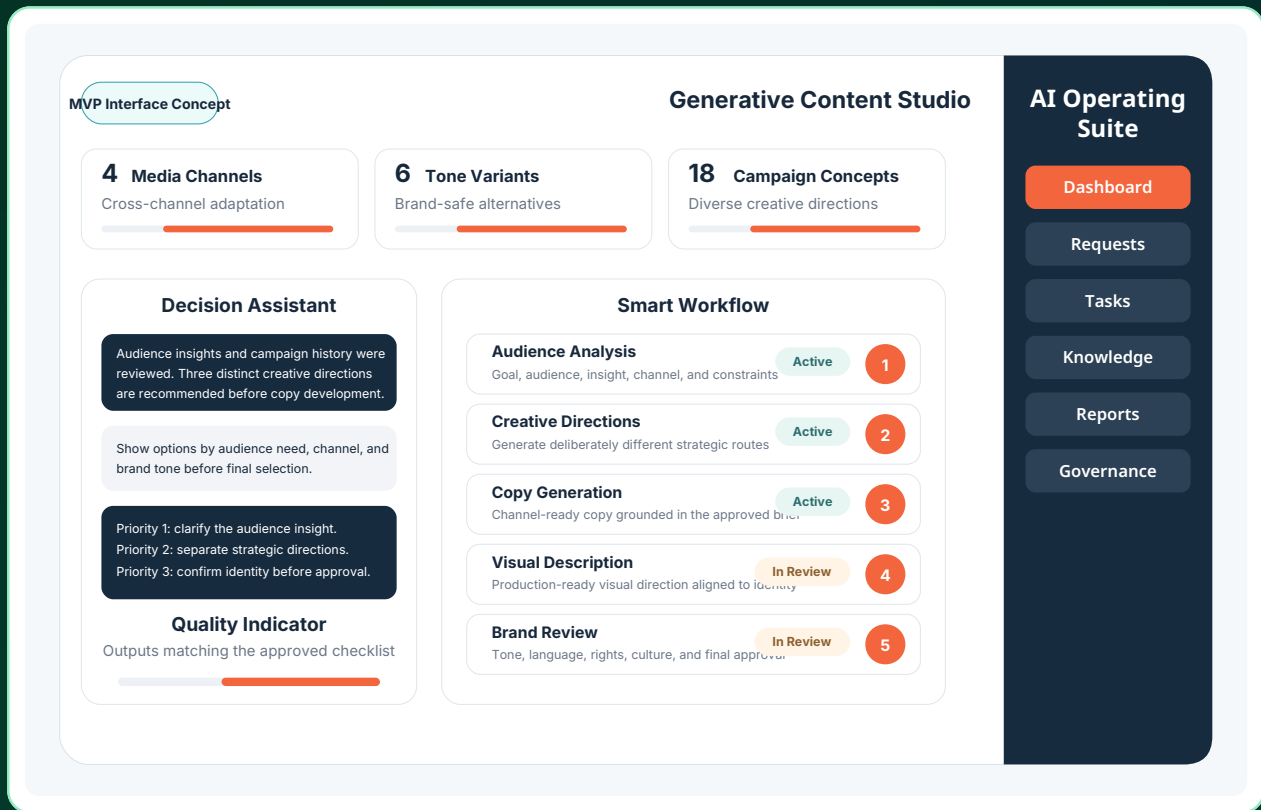


Figure 1. The actual Generative Content Studio interface, translated into English while preserving the original system layout.

The platform does not begin with an unrestricted writing box. It begins with a journey covering audience analysis, creative directions, copy, visual description, and brand review. The figures for campaign concepts, tone variants, and media channels illustrate working capacity; they are not verified performance measurements.

Component	Function
Brief Center	Converts the request into fields for objective, audience, message, channel, constraints, and sources.
Alternative Studio	Generates deliberately different directions while reducing similarity and literal copying.
Brand Reviewer	Checks tone, vocabulary, visual elements, and brand rules.

Approval Gateway

Records the human reviewer, version, tool, and decision date.



Output Engineering in Advertising

Output engineering is the design of the environment in which models produce content suitable for professional use. This environment includes a structured brief, brand context, approved examples, exclusion rules, factual sources, an output schema, and an evaluation method. The text prompt is therefore only one small part of the system.

Brief Inputs

Objective, audience, offer, core truth, channel, deadline, language, and dialect.

Brand Context

Values, tone, preferred and prohibited terms, slogans, and campaign examples.

Constraints

Claims requiring evidence, sensitive topics, text length, and image rights.

Output Schema

Headline, key message, call to action, channel adaptation, and reason for selection.

Evaluation Criteria

Clarity, relevance, distinction, accuracy, culture, identity, and feasibility.

Generation Trace

Model, version, inputs, references, decisions, and the responsible human reviewer.

Teams should intentionally request different directions rather than asking for the "best idea." Diversity constraints may vary the metaphor, audience angle, or narrative structure. Independent human selection should take place before model scoring is revealed in order to reduce anchoring on the first output.



Applied Case: Digital Campaign Cycle

1

Brief Intake

Extract elements, identify missing information and factual sources, and flag material that must not be submitted to an external tool.

2

Creative-Direction Generation

Produce strategically separated groups of ideas and explain how each direction supports the objective.

3

Copy and Visual Description

Draft copy for the channel and audience, and prepare a visual description that does not conflict with the brand identity.

4

Multi-Gate Review

Review accuracy, rights, culture, language, identity, and production feasibility.

5

Approval and Learning

Preserve the approved version and the reasons for revision or rejection as retrievable organizational knowledge.

This cycle prevents generated drafts from moving directly to publication and turns human comments into improvement data rather than leaving them scattered across chats and files.



Governance, Rights, and Data

Generative advertising introduces intersecting risks involving accuracy, intellectual property, privacy, and discrimination. WIPO recommends reviewing tool terms, material sources, the extent of human contribution, and ownership elements in both inputs and outputs. The Saudi Authority for Intellectual Property likewise emphasizes protection of original works and responsible rights management (WIPO, 2024; Saudi Authority for Intellectual Property, 2026).

Area	Review Question	Required Action
Facts and claims	Can every number, benefit, or factual claim be substantiated?	Connect each claim to a source and block publication when evidence is absent.
Intellectual property	Were protected materials, styles, or another party's marks used?	Review source, license, tool terms, and the level of human contribution.
Personal data	Does the brief contain identifiable data or direct personalization?	Minimize data and identify the lawful basis under the PDPL.
Identity and culture	Are the language and imagery suitable for the Saudi context?	Use a local reviewer, sensitivity checklist, and audience testing.
Transparency	Is disclosure of AI use required?	Apply a disclosure policy based on channel, entity, and regulatory requirements.

The platform should not use client data or confidential assets for training or improvement unless a clear contract and approved policy permit it. It should retain only the minimum required data and define retention periods and access permissions.



Measurement Framework and Expected Analytical Outcomes

Evaluation should balance productivity, quality, diversity, and governance. Writing time may fall while review time rises, and individual output quality may improve while campaigns become more similar. The process must therefore be measured at several levels.

P

Productivity and cycle time

C

Creativity and diversity

G

Governance and safety

Indicator	Definition	Test Method
Time to first draft	From a complete brief to the first reviewable draft.	Before-and-after comparison for one service type.
Major revision rate	Drafts whose core idea or message materially changed.	Classification by the human reviewer.
Direction diversity	Differences in angles, vocabulary, and narrative structures.	Independent coding supported by text-similarity analysis.
Brand alignment	Compliance with tone, message, and identity rules.	Checklist completed by a brand reviewer.
Rights or data incidents	Unauthorized use or information disclosure.	Target zero, supported by an incident log.
Team satisfaction	Perceived benefit, trust, and review burden.	Survey and short interviews.

The design hypothesis is that integrating generation within a structured brief, rules, and review process will create greater value than open individual use. A field experiment is still required before this hypothesis can become a causal claim.



Discussion

The principal challenge is not the ability to produce content, but the ability to produce distinctive, safe, consistent content whose production path can be explained. As generation becomes easier, selection and editing become more important. Reliance on ready-made outputs can homogenize campaigns, whereas involving people in problem definition and early direction-setting helps preserve diversity.

The proposed model creates organizational value by standardizing briefs and preserving versions and decision rationales. It also transforms repeated feedback into knowledge: prohibited terms, claims requiring evidence, rejection patterns, and quality measures. The platform can therefore improve its support without learning from unauthorized data.

Implications for Practice

- Train writers and designers to critique outputs, not merely to formulate prompts.
- Create a curated library of approved examples rather than uploading an unclassified archive.
- Separate exploratory generation from generation intended for publication.
- Define when external tools are prohibited because of confidentiality or rights.
- Evaluate diversity across campaigns, not only the quality of each campaign in isolation.



Implementation Roadmap

1

Policy and Unified Brief

Define permitted and prohibited cases and design brief fields, brand rules, data rules, and rights controls.

2

Limited Internal Pilot

Select one service, such as social-media posts, and keep all generated outputs in draft status.

3

Dual Review and Measurement

Use both a content reviewer and a brand reviewer while collecting work time, revisions, diversity, and incidents.

4

Integration and Archiving

Connect the platform to the request system and preserve the generation trace, approved version, and decision rationale.

MVP Acceptance Criteria

Criterion	Proposed Threshold
Safety	No automatic publication and no data or rights incident.
Value	Reduced draft time without an unacceptable increase in review time.
Quality	No decline in brand-alignment or accuracy scores below the baseline.
Diversity	No increase in similarity among directions compared with human production.



Conclusion and Recommendations

The study presents a model for integrating generative AI into advertising as part of a governed production process. The model begins with a structured brief, generates intentionally diverse alternatives, passes through evaluation for meaning, identity, culture, accuracy, and rights, and then preserves the decision trace. This moves the organization from untraceable individual use toward a platform for learning and operations.

The study recommends preserving the human role in problem definition and final selection, adopting clear data and rights policies, and avoiding the use of speed as a stand-alone success measure. It also recommends a field pilot on a defined service and the participation of content, brand, legal, and data specialists in the design of review gates.

Future Research

- Compare three operating modes: human-only, open AI use, and AI within the governed platform.
- Measure audience response to Arabic content that is generated, AI-assisted, and fully human-designed.
- Study the effect of dialects and local contexts on accuracy and acceptance.
- Analyze the relationship between generation intensity and long-term homogenization of creative identity.
- Develop a reproducible measure for the diversity of advertising directions.

Originality statement: The study does not rely on confidential data or unpublished campaign results. The interface represents a real product model, while the numerical indicators shown in it remain design examples until validated through field implementation.



References

The list follows APA 7 conventions and separates empirical evidence from regulatory and professional sources. Publication in a specific journal may require adjustment to that journal's author guidelines.

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