

The background features a dark blue gradient with abstract, glowing shapes in shades of purple and pink. Two thin, light blue lines intersect to form a large 'A' shape. The text is positioned on the left side of the image.

AWS re:Invent

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Creative Content Generation with Amazon Nova Reel & Amazon Nova Canvas

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Agenda

- 01 Amazon Nova Foundation Models
- 02 Amazon Nova Canvas
- 03 Amazon Nova Reel
- 04 Customer spotlight: Dentsu Digital
- 05 Future: A sneak peak

Amazon Nova

State-of-the-art foundation models that deliver frontier intelligence and industry leading price performance

UNDERSTANDING MODELS

Amazon Nova
Micro

Amazon Nova
Pro

Amazon Nova
Lite

Amazon Nova
Premier

CREATIVE CONTENT GENERATION MODELS

Amazon Nova
Canvas

Amazon Nova
Reel

Amazon Nova Canvas

State-of-the-art Image Generation Model

NOW GENERALLY AVAILABLE

Gallery

IMAGES FROM AMAZON NOVA CANVAS





Amazon Nova Canvas

IMAGE GENERATION MODEL

Enables creation and editing of studio-quality images for advertising, marketing, e-commerce, and other domains (e.g., a natural exfoliating body scrub with a vibrant colorful splash of mint and cucumber juice in a bathroom with a beautiful natural view)

Image dimensions

Up to 2K x 2K

Core features

Image generation
and image editing

Fine-tuning

Coming Soon!

Advanced features

Color palette using hex codes, background removal, image conditioning

Recommended Use Case

Creation of images for advertising, marketing, social media, publishing, e-commerce

Benefits



State-of-the-art image quality



Rich set of features for generation and editing



Built-in controls for safe and responsible use of AI

Benefits

State-of-the-art
image quality



State-of-the-art performance on image quality



State-of-the-art performance on text-image alignment



Generates multiple resolutions up to 2K x 2K and different aspect ratios

Amazon Nova Canvas

Amazon Nova Canvas

OpenAI Dall E-3

Stability AI SD3.5 Large

Automated Evaluations

Image quality - Measured by ImageReward Score	1.25	1.05	1.08
Instruction following – Measure by TIFA score (Text to Image Faithfulness)	0.90	0.86	0.89

Winning rate vs Dall E-3

Winning rate vs Imagen-3

Human Evaluations (A/B testing of Nova Canvas vs other models)

Image quality - Winning rate (Win/tie/loss rate) ¹	57.7% (54.5%/6.4%/39.1%)	50.1% (48.2%/5.3%/46.5%)
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¹: Winning rate is defined as win + ½ tie

Benefits

Rich set of features



Generation features: Image conditioning, image variation, color palette



Editing features: Background removal, inpainting, outpainting



Customization: Simple API to adapt to your data (coming soon!)

Benefits

Built with responsible AI



Minimizes the generation of harmful content with strong guardrails



Adds a watermark and content credentials to generated images for transparency



Provides indemnity for the generated images

Text to image

GENERATE IMAGES FROM TEXT PROMPTS

A dinosaur sitting in a tea cup



Text to image

GENERATE IMAGES FROM TEXT PROMPTS

A portrait of a smiling young woman with long, flowing hair, standing in natural sunlight



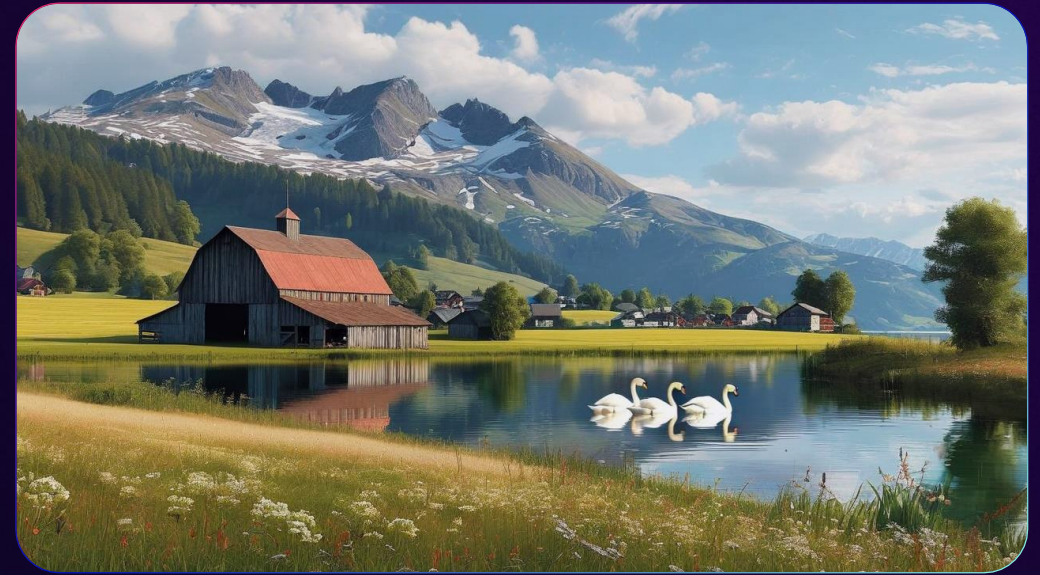
Inpainting

EDIT AN IMAGE

Input image



Inpainting the image with a group of swans



Outpainting

GENERATE DIFFERENT BACKGROUNDS

Input Image



Generated Images With Different Background



Image Conditioning

LEVERAGE REFERENCE IMAGES TO GUIDE IMAGE GENERATION

Input Image



Input Prompt

A hamster eats
apple slice



Generated Images With
Different Background



Image Conditioning

LEVERAGE REFERENCE IMAGES TO GUIDE IMAGE GENERATION

Reference Image



+



Input Prompt

A wooden boat
in summer

→

Output Using
Reference Layout



Color palette

GENERATE IMAGES IN A COLOR SCHEME

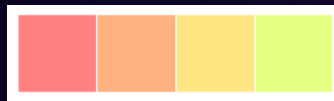
Input Image

a jar of salad dressing in a rustic kitchen surrounded by fresh vegetables with studio lighting

+

Input hex codes

['#ff8080', '#ffb280', '#ffe680', '#e5ff80']



→

Color-controlled output



Background Removal

REMOVE BACKGROUND FROM IMAGES

Input Image



Removed background



Amazon Nova Reel

State-of-the-art Video Generation Model

NOW GENERALLY AVAILABLE



"Slow cam of a man middle age; 4k; Cinematic; in a sunny day; peaceful; highest quality; dolly in"

"Closeup of a large seashell in the sand. Gentle waves flow around the shell. Camera zoom in."





"A mushroom drinking a cup of coffee while sitting on a couch, photorealistic."

"Cinematic dolly shot of a juicy cheeseburger with melting cheese, fries, and a condensation-covered cola on a worn diner table. Natural lighting, visible steam and droplets. 4k, photorealistic, shallow depth of field"





Amazon Nova Reel

VIDEO GENERATION MODEL

Enables creation of short videos through simple prompting via input images or a natural language prompts (e.g., perfume bottle with jasmine and citrus themes and a calming, natural setting).

Video duration

6 seconds

Upcoming features

Video editing, long videos with storyboarding

Recommended use case

Creation of short video clips for marketing, advertising, entertainment, and social media applications

Features

Text-to-video generation, image-to-video generation

Benefits



State-of-the-art video quality



Camera motion control using natural language



Built-in controls for safe and responsible use of AI

Benefits

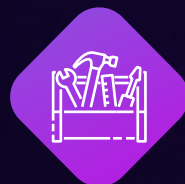
State-of-the-art video quality with camera motion control



Generate videos from input text and image



State-of-the-art performance on video quality, and video consistency



Supports different types of camera control through natural language text

Amazon Nova Reel

Winning rate vs Gen-3 Alpha

Winning rate vs Luma 1.6

Human Evaluations (A/B testing of Reel vs other models)

Video quality - winning rate¹
(Win/tie/loss rate)

61.4%
(56.4%/9.9%/33.7%)

52.8%
(51.1%/3.4%/45.5%)

Video consistency - winning rate
(Win/tie/loss rate)

71.6%
(67.0%/9.1%/23.9%)

77.3%
(74.7%/5.1%/20.2%)

1: Winning rate is defined as win + ½ tie

Benefits



Minimizes the generation of harmful content with strong guardrails



Adds a watermark to generated videos to build trust and provide transparency



Provides indemnity for the generated videos

Built with responsible AI

Coming soon

Advanced features



Generate long videos of up to 2 mins with storyboarding support



Video editing and support for higher resolution (1080p)



Further improvements to generation of human subjects in videos

Case Study: Amazon Ads





Long-video with Storyboarding

- > **Scene 1** - "A shot of woman with dark curly hair entering futuristic glass elevator..."
- > **Scene 2** - "A monkey sitting on the floor of a rainforest, emerald rainforest backdrop. Golden hour lighting, atmospheric fog..."
- > **Scene 3** - "woman with dark curly hair, wears sleek, form-fitting jacket made from a reflective, iridescent material..."
- > **Scene 4** - "A group of people wearing backpacks staring at a waterfall, serene and tranquil rainforest..."
- > **Scene 5** - "young woman looking around in a rainforest, she is in awe, people in the background move around, lush vegetation"
- > **Scene 6** - "a group of people looking around in a rainforest, people in the background move around, lush vegetation"
- > **Scene ...**



Theme - "A futuristic rainforest"

Customer spotlight: Dentsu Digital

Self Introduction



山本 覚

SATORU
YAMAMOTO

Executive Officer (AI) of Dentsu Digital Board, Dentsu Data Artist Mongol
Chief AI Master in dentsu Japan
Researcher in University of Tokyo

Develops various marketing solutions such as the vision measurement engine "Sharest" and the integrated creative production engine "∞AI".

Non-Answerable Quiz TV Tokyo Every Monday to Wednesday 17:30-17:45

Dentsu

Dentsu : Japan's Largest Advertising Agency.

Operating globally in app 120 countries and over 71,000 employees

dentsu



japan

americas

emea

apac

Dentsu Digital is one of the biggest comprehensive digital firm in Japan.

We develop new business utilizing **Amazon Bedrock**.



Dentsu Digital

Leveraging **Creativity x Technology** for
Growth (ads · media · CR) and **Transformation** (DX · SI).

 **AI Ads**

Get Noticed

 **AI Chat**

Be Understood

 **AI Contents**

Get Liked

 **AI Marketing Hub**

Data & AI Platform

mugen AI Ads

In 2024, **118 companies** implemented it, with an average improvement of **154%**.

4AIs 「Message Discovery」 「Creative Generation」 「Effect Prediction」 「Suggestion」 will revolutionize the digital creative production process.

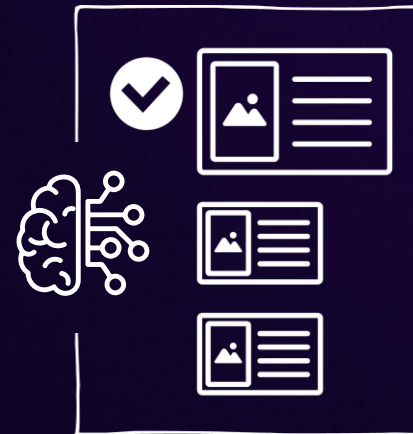
01 Message Discovery



02 Creative Generation



03 Effect Prediction



04 Suggestion

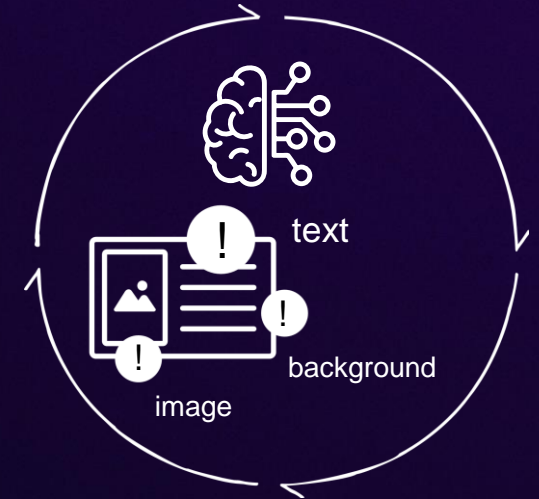


Image Ads > Generation

It is possible to edit banners in detail only with text instructions.

Powered by Amazon Nova Canvas.



Original



Replace People



Out-paint Background



Replace Background

Image Ads > Prediction & Suggestion

The **win rate** is updated daily based on past distribution data, and **points to improve** are displayed for each banner.

Advertiser > Platform > Campaign > Ad Group > Ads creatives

Report by creative

campaign	ad group	advertisement	ad type	image	text	Cost(H)	Imp	Win rate after	Improvement	status
[F]_buy/s...	[From Ju...	220415_2...	RESPONS...		First of all, since this...	¥35,446	8,830	42.58%	DISPLAY	OFF
[F]_buy/s...	[From Ju...	220415_n...	RESPONS...		First of all, since this...	¥1,780	442	40.18%	DISPLAY	OFF
[F]_buy/s...	[From Ju...	220415_t...	RESPONS...		First of all, if was feel...	¥156,286	79,191	64.20%	DISPLAY	ON
[F]_buy/s...	[From Ju...	220415_t...	RESPONS...		First of all, if was feel...	¥123,438	29,840	64.95%	DISPLAY	ON
[F]_buy/s...	[From Ju...	0705 start...	RESPONS...		First of all, from from...	¥50,078	9,510	60.23%	DISPLAY	ON
[F]_buy/s...	[From Ju...	220831_s...	RESPONS...		First of all, from from...	¥192,021	85,070	64.49%	DISPLAY	ON
[F]_buy/s...	[From Ju...	hirosugi_...	RESPONS...		First of all, if was feel...	¥73,185	28,088	59.52%	DISPLAY	ON
[F]_buy/s...	[From Ju...	221201_e...	RESPONS...		First of all, if was feel...	¥126,318	55,463	59.19%	DISPLAY	ON
[F]_buy/s...	[From Ju...	221201_l...	RESPONS...		First of all, in order to...	¥122,394	46,180	63.68%	DISPLAY	ON
[F]_buy/s...	[From Ju...	221201_l...	RESPONS...		First of all, from from...	¥0	0	Not for learning	DISPLAY	OFF

DAI Discovering the Axis of Appeal Generate Creative Predicting Creativity Improve Creative

Creative Improvement Proposal

Improvement Suggestions Reference Banners

Reports by Campaign

Well balanced ingredients for fundamental health!

DD SUPPLEMENT click here >

Creative Element Contribution

- People
- Copy
- Background Color
- Logo position
- Copy position

Improvement Suggestions

Select	Location	Expectation	Suggest
<input type="checkbox"/>	Number of women	92%	Include an image of a woman.
<input type="checkbox"/>	Background color	84%	to
<input type="checkbox"/>	Product Location	72%	Reduce the product size and put the banner...
<input type="checkbox"/>	Text Position	69%	Put your copy in a large, centered area.
<input type="checkbox"/>	Location of the person	52%	Put the woman on the right side of the banner.

After

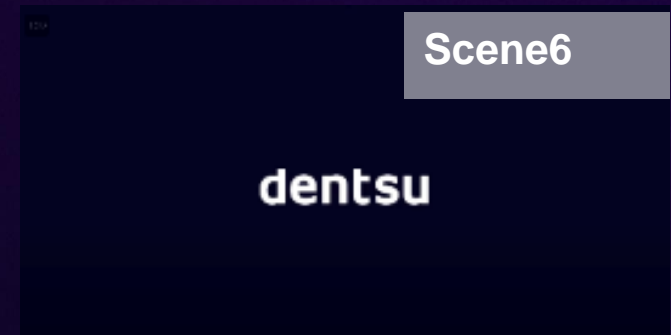
DD SUPPLEMENT Well balanced ingredients for fundamental health!

click here >

Video Ads > Prediction & Suggestion

Multimodal AI ✕ Video Ads Data

Specifically suggest how to revise each scene.

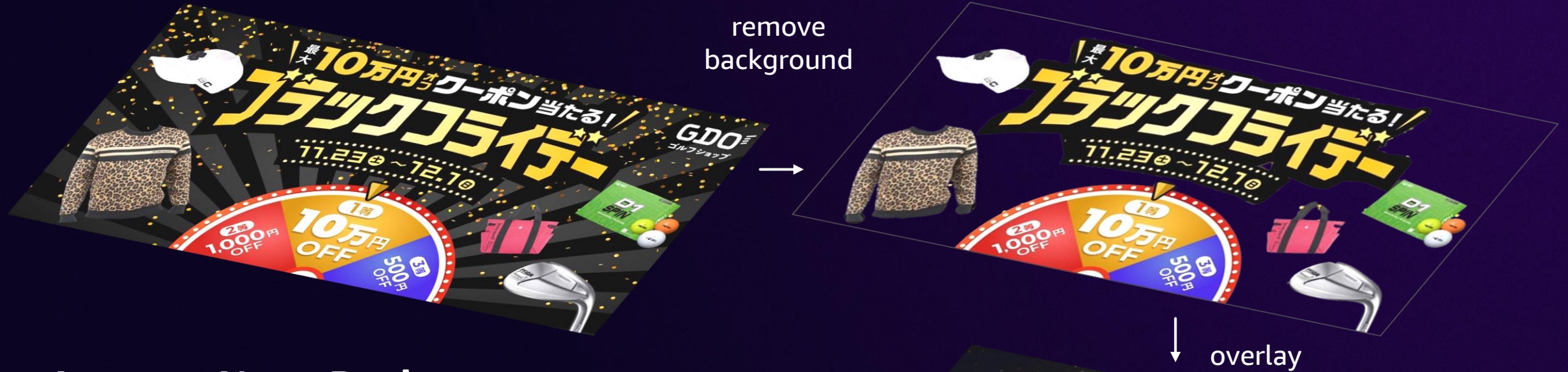


Amazon Nova Reel for Video Ads Generation

Client Case Studie > GDO Black Friday Banner

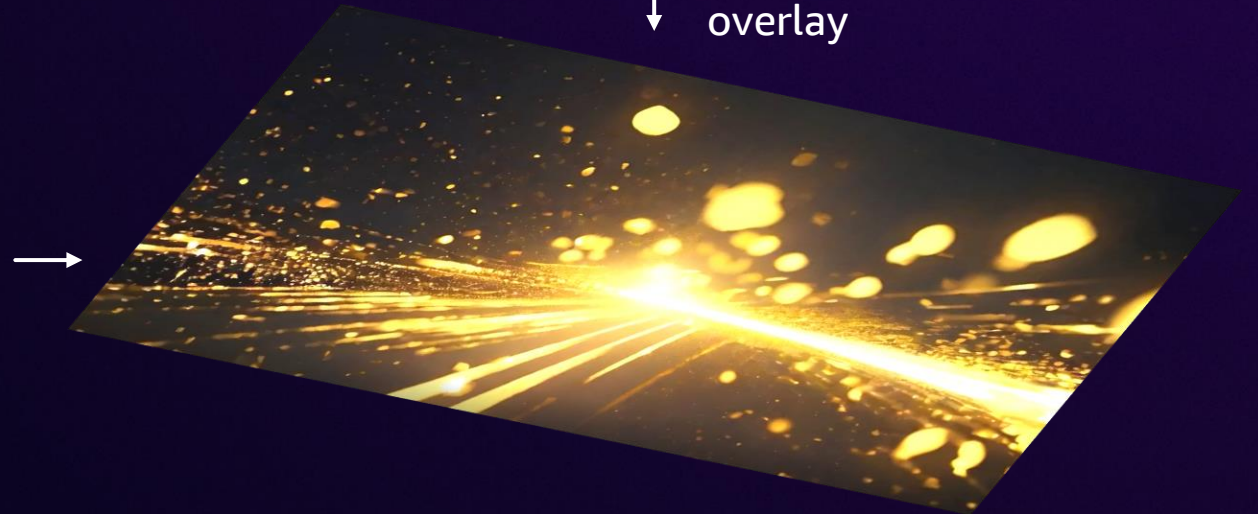


How to Make a Video Banner



Amazon Nova Reel

Prompt : Create a video with a black background featuring golden light radiating from the center. The light should slowly pulse and move outward. Add shimmering gold flakes that drift down, falling at random speeds and directions to create a dynamic, sparkling effect.



GDO Banner powered by Amazon Nova Reel



GDO Banner powered by Amazon Nova Reel

Another variation of
'radiation of light'



Spinning
roulette wheel

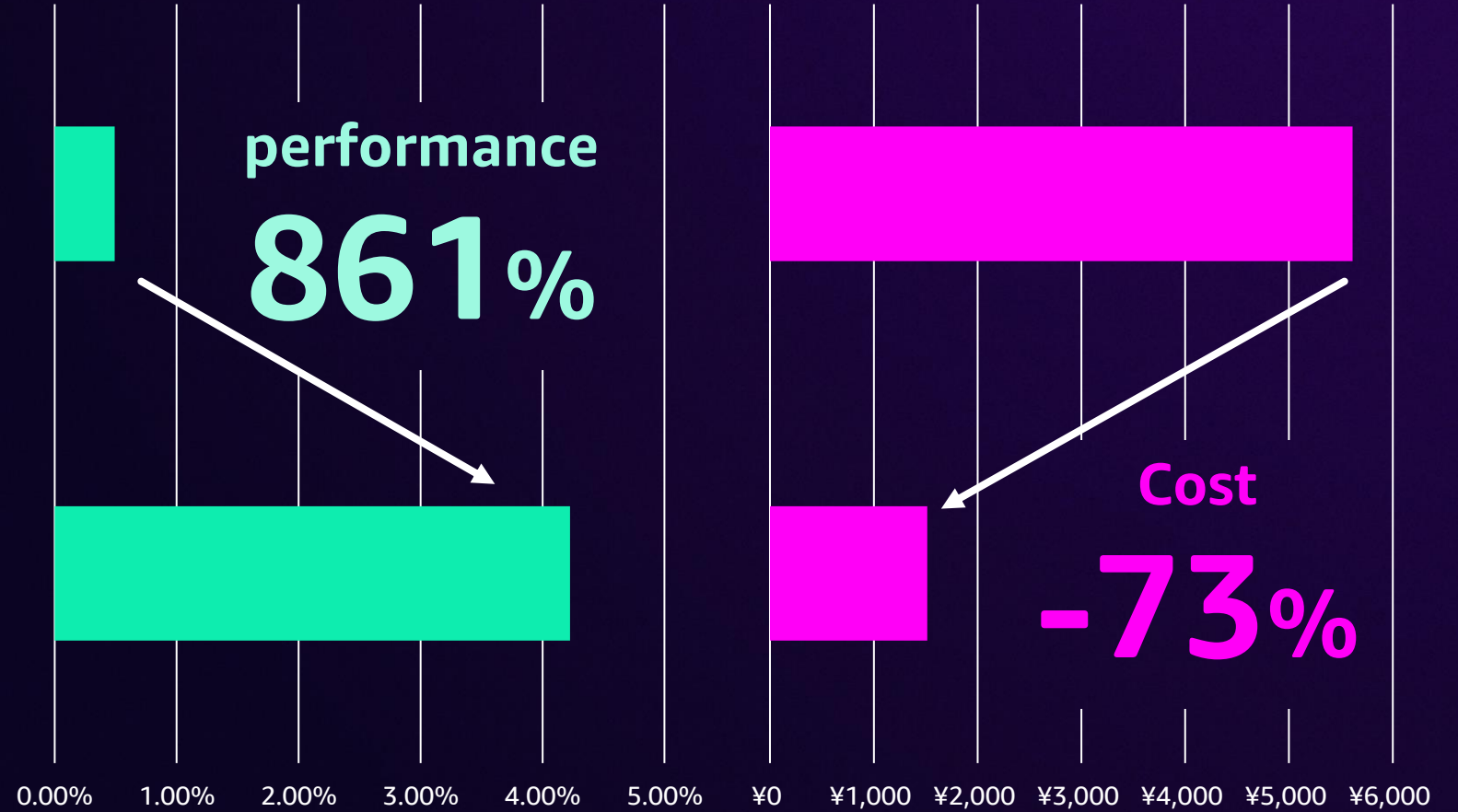


GDO Banner powered by Amazon Nova Reel > Result



CVR

CPA



Other Client's Banner powered by Amazon Nova Reel

KAKAKU.com

🏠 住宅ローンで
変動金利を選ぶなら、
価格.comで比較

変動金利 固定金利

価格.com [詳しくはこちら >](#)

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APA HOTEL

APA HOTEL&RESORT
〈大阪なんば駅前タワー〉
OSAKA NAMBA EKIMAE TOWER

2024年12月2日(月)
GRAND OPEN

30号出口 徒歩2分

西日本最大級
全2,055室
超高層
タワー型ホテル

BAR & RESTAURANT 17CLUB

アパホテル&リゾート(大阪なんば駅前タワー)
0570-010-711 大阪府大阪市東区
南町1-13

「アパ直」からなら、比較なしで最安値。

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Amazon Nova Reel for CX

Please write a storyboard for a video illustrating the collaboration between Dentsu Digital and AWS through AI.

The cityscape at dawn is depicted with the camera slowly zooming out to capture the bustling urban scenery, as soft, warm light reflects off the windows of skyscrapers, while birds fly dynamically across the sky, creating an impressive visual. Japanese anime style.

Inside a modern office, people are actively discussing while using digital devices, captured in a shoulder shot, with natural light warmly illuminating the space, and animated charts on digital screens scrolling rapidly in the background, creating a bright and open atmosphere. Japanese anime style.

Inside a vast data center, server racks are viewed from a crane shot, while cool blue LED lights provide a serene yet futuristic ambiance, and robotic arms efficiently moving components add dynamic movement. Japanese anime style.

The AI workflow is shown flowing across digital screens with a panning shot, as a soft blue light colors the background, while data streams dynamically arc and weave between screens, highlighting an interactive and high-tech feel. Japanese anime style.

Close-ups show improvements in digital ad design and personalized marketing campaign screens, with screen light casting a spectrum of colors, while animated graphs dynamically fluctuate to convey real-time data changes, visually conveying the specificity of results. Japanese anime style.

The futuristic city nightscape is captured from above with shimmering lights of skyscrapers like stars, as the camera smoothly zooms in, and drones fly through the cityscape, emphasizing its evolution and evoking a sense of hope. Japanese anime style.

A serene night sky filled with countless shooting stars streaking dynamically across the canvas, set against the silhouette of a tranquil city skyline, as the camera slowly pans to capture the celestial display, offering a breathtaking and lively conclusion. Japanese anime style.

Amazon Nova Reel for CX



Amazon Nova Reel for CX

Popular TV Producer Shinji Tanaka

If this can be generated, then countless ideas like 'What about that?' or 'I'd like to discuss this, too' came to mind. I realized once again that the day is not far off when abstract expressions, things difficult to shoot, and things challenging to visualize will be realized by AI video generation, becoming indispensable **not just for television but for visual content as a whole.**



Dentsu Digital's AI Solution

Leveraging **Creative x Technology** for
Growth (ads · media · CR) and **Transformation** (DX · SI).

 AI Ads

Get Noticed

 AI Chat

Be Understood

 AI Contents

Get Liked

 AI Marketing Hub

Data & AI Platform

Future: A Sneak Peek

COMING SOON

What's Next for **Amazon Nova**?

NEW

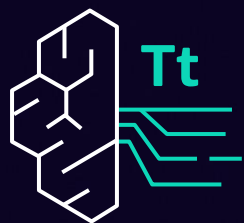
Amazon Nova **Speech-to-Speech**

COMING SOON

NEW

Amazon Nova **Any-to-Any**

COMING SOON



Speech capabilities

Semantically understand and articulate speech with a single, unified model architecture!

- Speech and audio modalities available on all Amazon Nova models
- Accurate speech understanding and generation across languages
- Human like natural and low latency conversational AI
- Speech to speech translation and localization
- Bidirectional streaming and batch processing APIs in Bedrock (Q1 2025)

Core Features

Human-like, natural conversational AI and content localization



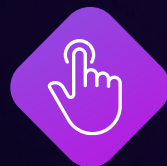
Fluid dialog handling and natural turn taking (e.g. Customer service call automation)



Expressive voices and adaptive speech responses (e.g. Ad content generation, Personal Assistant)



Transfer speaking style for each narrator (e.g. Podcast and Audiobook translation)



Ease of controllability through natural language prompts, voice selections, and personas (e.g. CS agent persona with American accent and empathetic responses)

Thank you!

Ashwin Swaminathan
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Veerdhawal Pande
pveer@amazon.com

Satoru Yamamoto
Dentsu Digital



Please complete the session survey in the mobile app