

SaaS METRICS PALOOZA

The Impact of AI on SaaS Metrics



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Thanks for Coming, See You Next Year!



Generative AI is likely to significantly influence SaaS (Software-as-a-Service) pricing models in several ways:

Tiered Pricing Based on AI Usage

SaaS providers may introduce tiered pricing models where pricing is directly linked to the amount of AI-generated output, or the level of AI features a customer uses. This could be similar to pricing based on storage or API calls, with different levels of AI capabilities offered at different price points (e.g., basic AI vs. advanced, real-time AI). Companies like OpenAI already use token-based pricing that charges based on the amount of data processed.

Value-Based Pricing

Generative AI could drive more value-based pricing, where the cost of the software is tied to the measurable business impact generated by AI. For instance, if the AI component significantly boosts productivity or automates labor-intensive tasks, SaaS vendors might justify higher prices for delivering greater ROI. This is particularly relevant in industries where AI enhances decision-making or automates creative tasks.

Subscription + Usage Hybrid Models

SaaS companies could adopt hybrid pricing models combining subscription fees with usage-based pricing. For example, customers might pay a base subscription fee for access to the platform, but additional AI-driven services (like content generation or predictive analytics) could incur extra charges based on actual usage (e.g., per generated report or piece of content).

AI-Powered Freemium Models

AI could enhance freemium models by offering basic generative AI features for free, while charging for more advanced AI tools and functionalities. This allows SaaS companies to acquire users with a free offering and later upsell them to paid plans as they need more powerful AI capabilities.

Customization and Integration Costs

SaaS solutions that integrate generative AI may offer more personalized and customizable services. For example, platforms with AI that can be trained on a company's specific data will likely charge a premium for this customization. The ability to train models specific to a business or use case (such as a company-specific language model) could justify higher pricing.

AI as a Feature Differentiator

Generative AI might lead to differentiation between SaaS offerings, where platforms with more advanced or specialized AI capabilities can command higher prices. This could lead to market segmentation, with premium SaaS products distinguished by their cutting-edge AI tools, while basic products without AI may remain at lower price points.

Performance-Based Pricing

Some SaaS companies might adopt performance-based pricing, where customers pay based on the results generated by AI models. For instance, SaaS platforms that offer AI-driven recommendations, such as in e-commerce, may charge based on conversion rates or the impact of AI on business outcomes like sales, engagement, or lead generation.

AI Licensing Fees

As SaaS platforms embed generative AI models from third-party providers (such as OpenAI, Anthropic, or Google), they might pass the licensing fees to customers, leading to additional charges for accessing AI-driven features. These costs could be baked into the subscription fees or charged as an add-on.

Operational Efficiency and Cost Savings

Generative AI could lower operational costs for SaaS providers by automating customer support, reducing the need for manual content generation, or streamlining data processing. SaaS companies might pass these savings on to customers or reinvest in more sophisticated AI features. However, some providers may use AI to create premium, high-value services, resulting in increased pricing.

Agenda

- How we got here: a brief history of SaaS metrics
- Look at what's changing: the four impacts of AI
- Summary and conclusions

A Brief History of the SaaS Business

- Per-user, per-month →
 - Great for month-to-month personal apps
- Per-user, per-year →
 - Easier invoicing, fewer churn opties, better cash flow
- Per-user, multi-year →
 - Win/win if discount less than churn rate
 - Pros built NRR in by tilting the deal (100, 120, 140 = 3 x 120)
- Usage-based
 - Either pure or hybrid (base + usage, base + overage)
 - Enter complexity: points, credits, volume discounts, rollover policy, ...

A Brief History of SaaS Metrics



- The further you moved from simple monthly SaaS, the more SaaS metrics **broke**
- Consider a 3-year, fully prepaid, \$30K/year deal, with a \$45K acquisition cost
- What's the CAC ratio?
 - CAC ratio = $1.5 = 45/30$ // You bought 30 units of ARR
 - Or is it really $0.5 = 45/90$ // But you bought 90 units of bookings
- Now, assume 80% gross margins, what is your CAC payback period?
 - CPP = 22.5 months = $(1.5/0.8)*12$ // The classic formula
 - CPP = 1 day // You invoice three years on day 1

The Top SaaS Metrics All Depend on ARR

- **ARR growth** = $ARR / PY\ ARR$
- **Churn rate** = $churn\ ARR / starting\ ARR$
- **CAC ratio** = $S\&M / new\ ARR$
 - Or magic number for those in the Upside Down
- **CPP** = $CAC\ ratio / subscription\ gross\ margin$
- **LTV/CAC** = $(1 / churn\ rate) / CAC\ ratio$
- **NRR** or **GRR** = $cohort\ ARR / PY\ cohort\ ARR$
 - With or without expansion



PY = Prior year

ARR Has Become The Achilles' Heel of SaaS Metrics

- The ARR concept is increasingly outdated
 - As soon as periodic spend is variable (via seats, overages, or usage), ARR goes out the window
- Creates the need for a **proxy** for ARR = annualizing months or quarters, trailing spend
 - Limitations: seasonality, churn vs. fluctuation
- Public companies don't like to release ARR
 - Implied ARR = 4 * subscription revenue



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The Four Impacts of AI on SaaS Metrics

- We must rethink ARR (which was happening anyway)
- For the first time, we have to consider cost
- We must rethink pricing drivers
- The pricing model takes on the heavy lifting

WE MUST RETHINK ARR

Rethinking ARR

- Wait, we love ARR because it's somehow stable and predictable
 - “If we don't mess up, this is what we get next year” – anonymous VC
- Even in pure usage-based pricing (UBP) models, we can get contractual minimums
- We should split the subscription revenue baby into baseline and variable
 - Do all internally analytics accordingly
 - We can call baseline “recurring” and variable “re-occurring”
- This is fine internally
 - It's really pricing model and contracts discussion more than an “ARR” discussion
 - Externally, I have trouble believing anyone will want to report in this way
- But to say that “recur” always meant contractual is revisionism
- Recurring was defined in contrast to perpetual
 - Recurring originally meant “might recur,” not “will recur”



The World's Only Fun MRR Example

A guy walks into a bar and orders a \$17 Martini. Is it MRR?

- If he's a tourist who happened to walk in, then no
- If he's lived here for two years and comes in every Thursday, yes
 - If he goes on a two-week vacation, is it MRR churn? And then expansion? Or do we damp somehow?
- If he just moved in, says he's picked our bar for his weekly Martini, yes.
 - This is month-to-month SaaS
- If it's a club with \$2000 annual membership and quarterly \$221 F&B minimum, yes
 - I'd probably even call it \$2,884 of ARR to reflect the annual nature of the contract
 - This example quickly touches on the overage model (e.g., some days he drinks 3)

Two Ways to Rethink ARR in a Monthly-Varying World

Split the Baby

- Careful separation of baseline and variable
- Classical SaaS metrics on baseline
- Pricing analysis on the split – e.g., will we generate churn if we upgrade to gold?
- Undesirable for external reporting
- Private/internal

Clinging to the past?

Spend is Truth

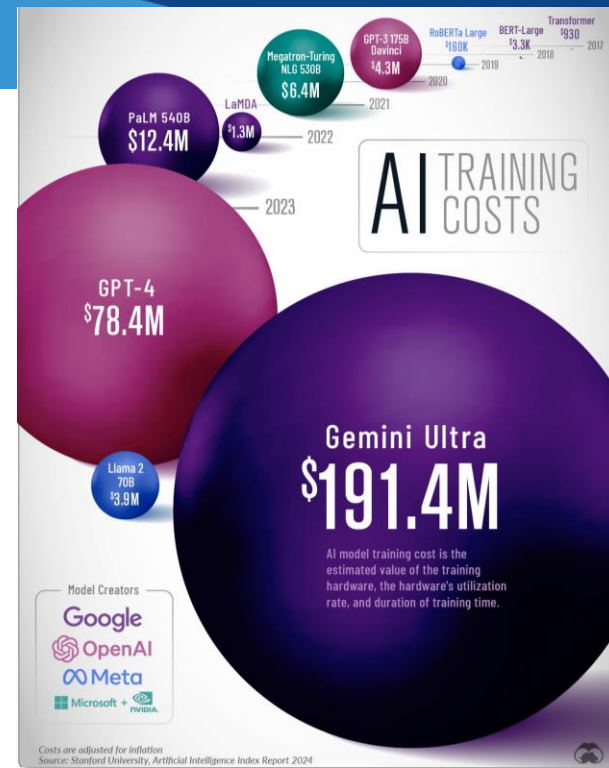
- There is no ARR; trailing spend is truth
- One bucket of “product revenue”
- Implied ARR = 4 * quarterly product revenue
- NRR via Snowflake method (two-year lookback) or change in implied ARR
- Heavy emphasis on forecasting and usage
- Use RPO and minimums in guidance setting
- Public/external

I lean here

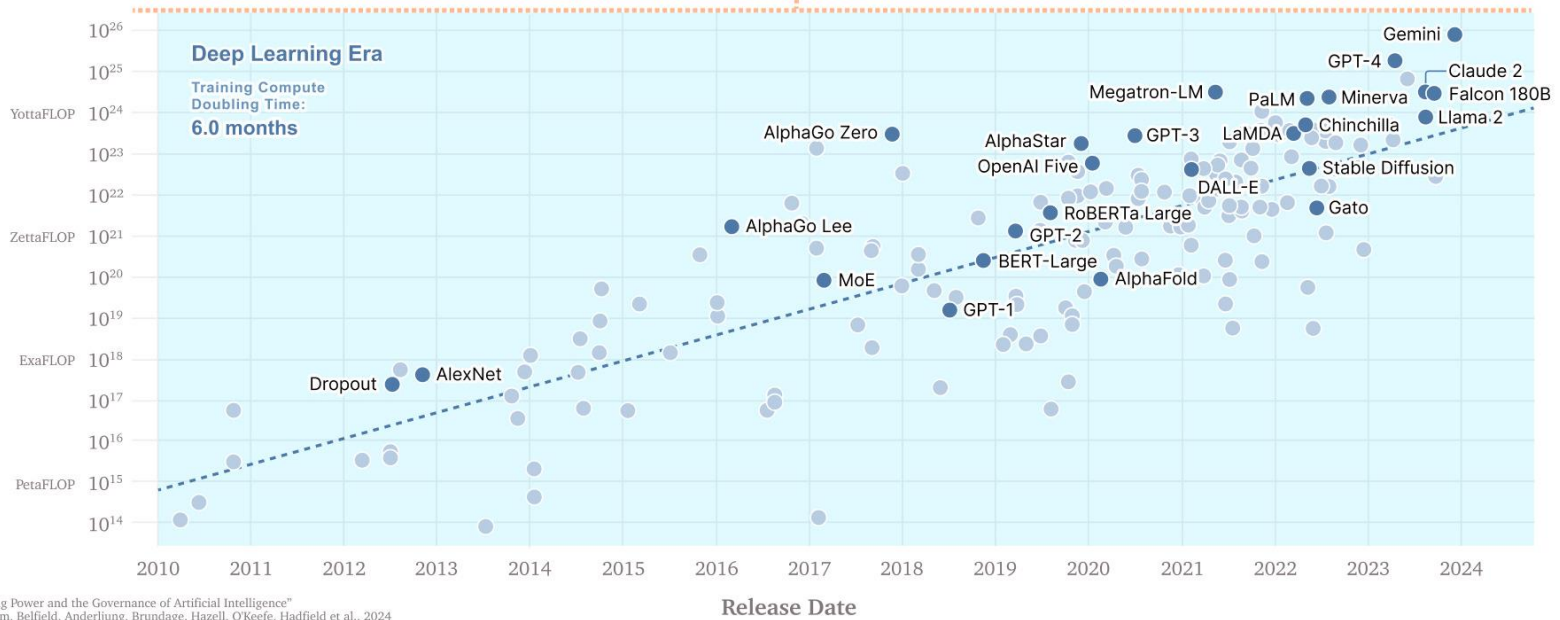
WE HAVE TO CONSIDER COST

AI is Expensive

- Microsoft and OpenAI working on \$100B data center project
- OpenAI has raised \$11.3B to date
 - Not including in-process \$6.5B round at \$150B **Hectocorn!**
 - Plus, a \$5B revolver just in case
 - Could spend \$3B billion training models this year
- The cost of building a single enterprise AI application ranges from \$600K to \$1.5M
 - With operating costs of \$350K to \$820K



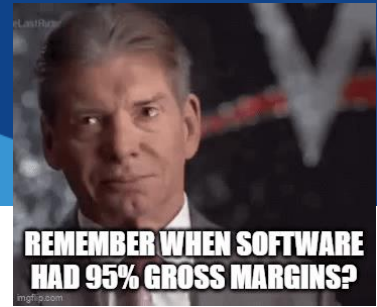
Cost of Training Rising Exponentially



Computing Power and the Governance of Artificial Intelligence
Sastry, Heim, Belfield, Anderljung, Brundage, Hazell, O'Keefe, Hadfield et al., 2024

See <https://www.oneusefulting.org/p/scaling-the-state-of-play-in-ai>

We Have to Care About Cost



- “The generative AI boom is compute bound.” – [a16z](#)
 - Building (training) big models is insanely capital intensive
 - Inferencing (using) them is not cheap
- In the days of yore, COGS were de minimis (ask Vince)
- In SaaS, COGS were typically around 20%
- With AI, COGS are huge by comparison, and thus gross margins low
 - OpenAI COGS [estimated](#) at 75%
 - Anthropic COGS [estimated](#) at 50%
- Action: study up on how infrastructure PAAS vendors price and measure
 - Relatively low value-added and somewhat commoditized = low gross margins
 - Cost-plus pricing comes into play

The Software Business Model is Evolving

- From the movie business (perpetual)
 - Invest scores of millions to create a product that you can easily distribute for free (GM ~100%)
- To the entertainment business (SaaS, slightly weak metaphor)
 - Then we had to run the theatre for them and not just mail them a DVD (GM ~80%)
- To big pharma (AI foundation models)
 - We need to spend \$1Bs to develop a drug and hope it's a blockbuster (GM ~100% when hits)
- To manufacturing (AI applications) ... ??
 - We build things and need to care about COGS, if not inventory (GM ~30%)

WE MUST RETHINK PRICING DRIVERS

The Evolution of Pricing Drivers

- Historical
 - Per-seat: per number of people using the software
 - Per-usage: per SMS sent, per hour used
 - Platform fees: where value isn't best monetized per user (e.g., EPM)
- The type of AI usually will determine the best drivers
 - Prediction (e.g., chatbots): what's it worth for a call deflection, or a more accurate forecast?
 - Personal productivity (co-pilots): how much is the productivity boost worth?
 - Perform actions (agents): how much in comparison to the human equivalent (e.g., call center, SDR)?
- Pricing philosophy
 - Monetize via editions: put new AI features into higher-level editions
 - Monetize via products: introduce new products with value-based pricing
 - Capture value through outcome-based pricing: per lead, per call resolved, per invoice processed

Case Study: Piper, the AI SDR from Qualified

- **Personified AI**
 - You don't buy Piper, you "hire" her
- **Piper is monetized by editions**
 - Not available in baseline Growth package
- **Editions are priced per entity**
 - Company or division thereof
- **Value can be easy to underestimate**
 - 24x7 = 3 SDRs, not 1
 - Multi-lingual = coverage model, over hiring
 - Value from instant responses
 - Value from superior answers

Meet **Piper**
the AI SDR

Piper automates your inbound pipeline generation motion to help you scale. The AI SDR you've been waiting for, Piper is ready to join your team today.

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PipelineAI Growth	PipelineAI Premier	PipelineAI Enterprise
Automate inbound pipeline generation	Scale pipeline with Piper the AI SDR and sales rep conversations	Leverage advanced enterprise functionality
<p>Everything you need to get started...</p> <ul style="list-style-type: none"> Automated Meeting Scheduling Website Marketing Offers Buyer Intent Signals Basic Chatbots Advanced Segmentation and Routing 	<p>Everything in Growth, plus...</p> <ul style="list-style-type: none"> Piper the AI SDR Hire Piper the AI SDR to identify, engage, and convert qualified buyers 24x7 Piper Conversations Piper Meeting Scheduling Piper Marketing Offers Sales Rep Conversations with Piper Copilot Piper Email (Coming soon) 	<p>Everything in Premier, plus...</p> <ul style="list-style-type: none"> Enterprise Reporting API Enterprise Single Sign-on Custom Cookie & Data Retention Policy Multiple Languages & Brands Third Party Research Intent Salesforce Sandbox Support Additional Deployments
\$3,500 per month		
CONTACT US	CONTACT US	CONTACT US

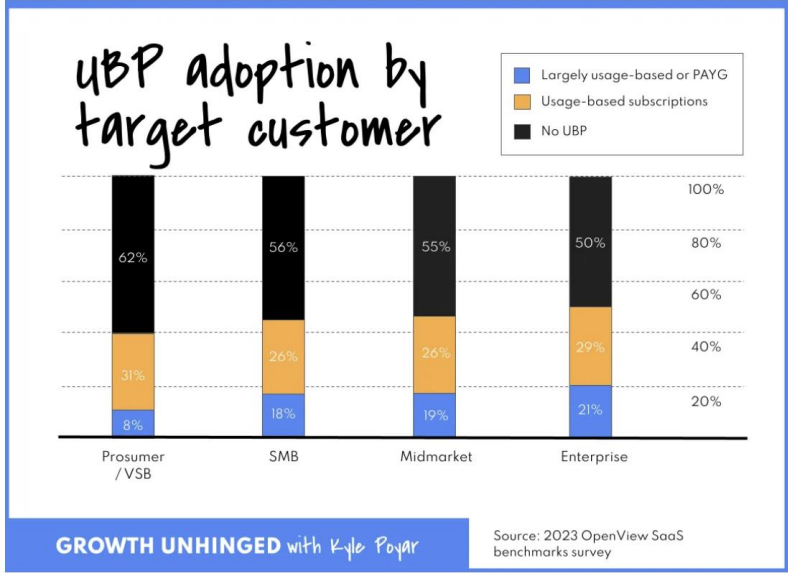
Aside: Kellogg's Three Rules of Pricing

- Value is the upper bound on pricing
 - Why would you pay more for something than the value it delivers?
 - In new spaces everyone wants to tap into value, because no established market for alternatives
- Alternatives are the lower bound on pricing
 - Why would I pay \$100K for yours if someone else sells one for \$50K that feels pretty close?
 - This is why marketing departments are in the business of differentiation
- Always hook your pricing model to things that go up
 - Passed down from the ancients (e.g., from MIPS to API calls and everything in between)

THE PRICING MODEL TAKES ON THE HEAVY LIFTING

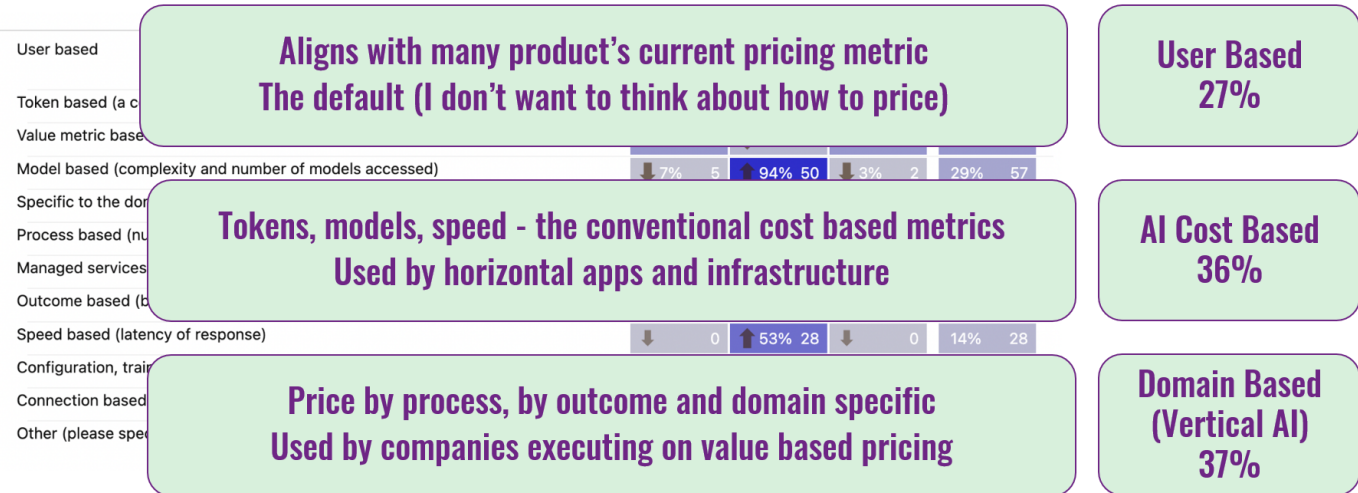
State of SaaS Pricing From OpenView

USAGE-BASED MODELS EXIST ON A SPECTRUM— MOST NOW FALL SOMEWHERE IN THE MIDDLE



A Recent AI Pricing Survey from Ibbaka

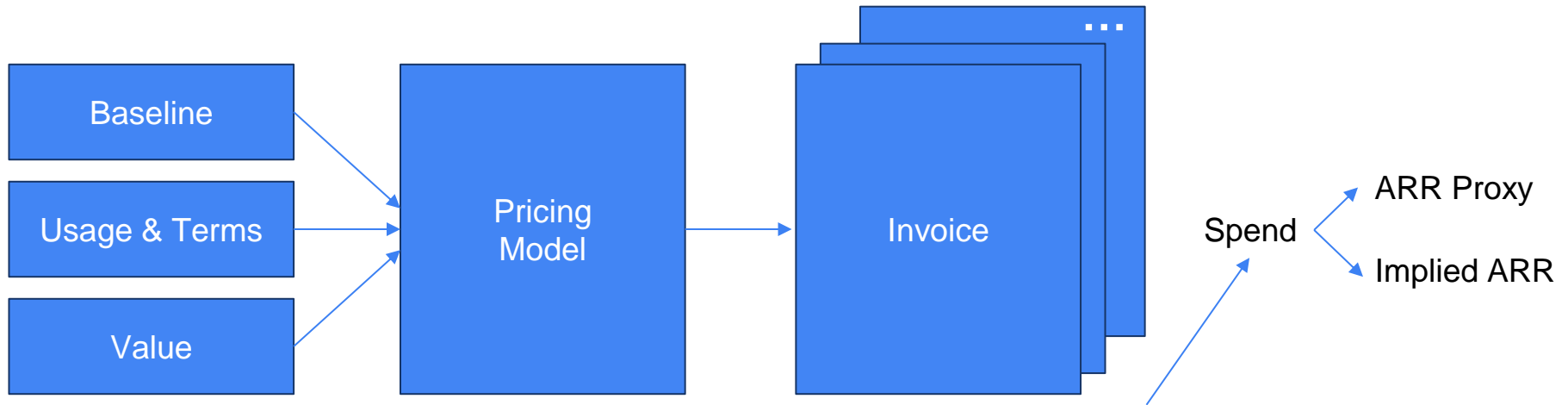
How do pricing metrics cluster?



From the survey "Monetizing Generative AI Roundtable Background Survey" data from Sept. 10, 2024
 N = 216

The Pricing Model Takes on the Heavy Lifting

In my estimation, the SaaS metrics won't change much, but the pricing models will



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Summary and Conclusions

- The move from annual SaaS to usage-based and hybrid is straining SaaS metrics
- The Achilles' Heel is ARR – the more months vary, the less meaningful it is
- AI is bringing four changes to SaaS and SaaS metrics
 - We need to rethink ARR (as we needed to do anyway)
 - We need to consider – for the first time – cost
 - We need to look at new pricing drivers
 - We will be moving the heavy lifting in the pricing model
- We will use some proxy for ARR and/or implied ARR
- And then plug that into existing SaaS metrics formulas
- On the metrics surface, little will have changed, but underneath a lot

Thank You

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