FHV
Vorarlberg University
of Applied Sciences

Beyond E-Commerce: When Digital Identities Become Economic Actors

(Dr. Peter Hoffmann, November 2026, Workshop 4)

WhoAmI?

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1 - Introduction

We know lots of models:



What do these models actually describe ?

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What do these models actually describe ?

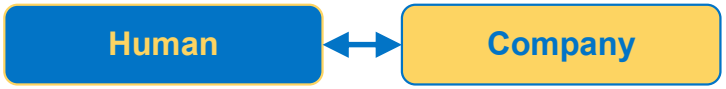
→ Such models describe relationships between economic actors.

→ The description of technologies is of secondary importance in this context.

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1 - Introduction

A look at the evolution of "commerce":

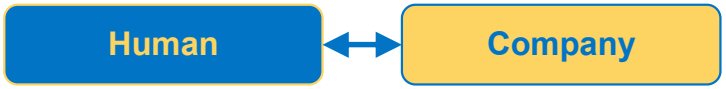
Traditional commerce 

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A look at the evolution of "commerce":

Traditional commerce



E-Commerce



Platform Economy

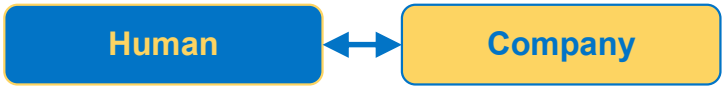


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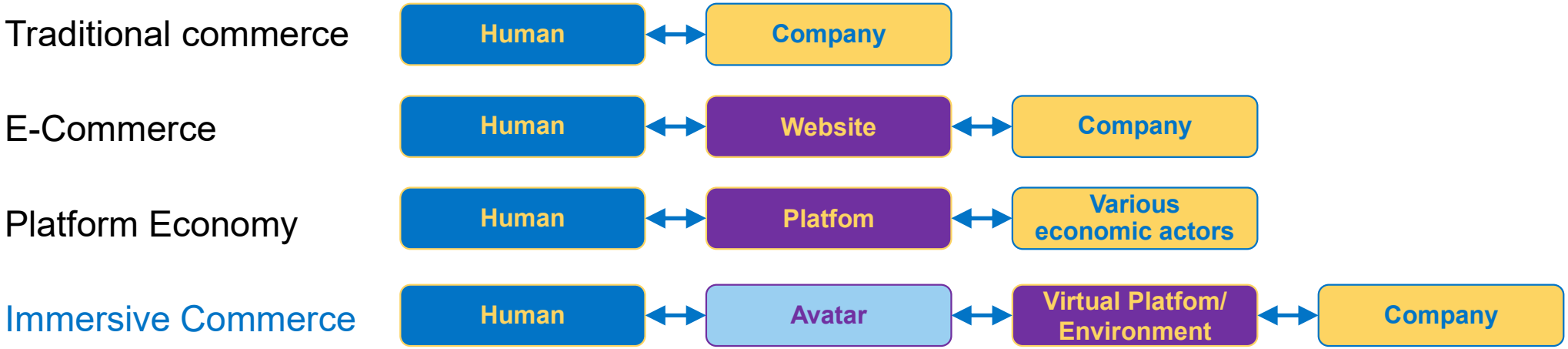


Immersive Commerce ?

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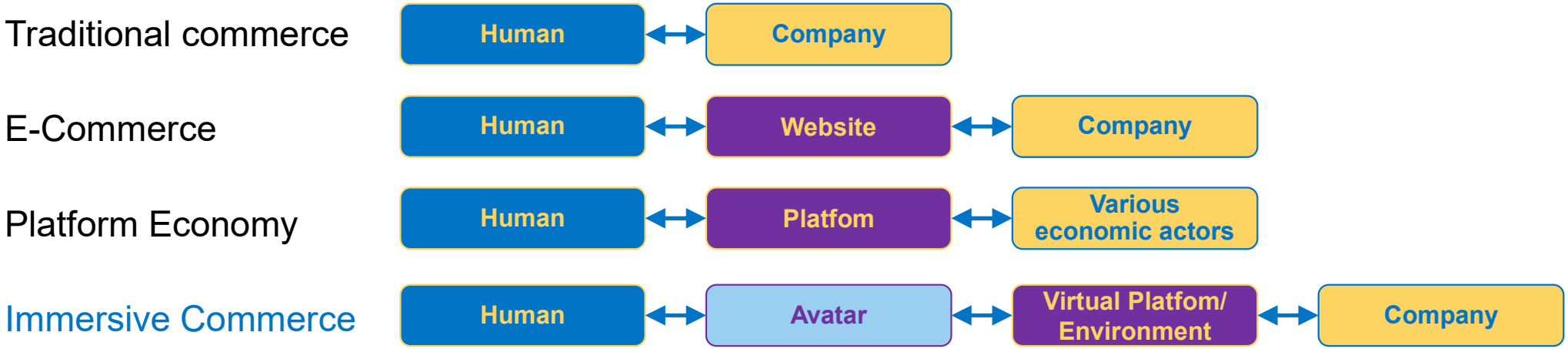
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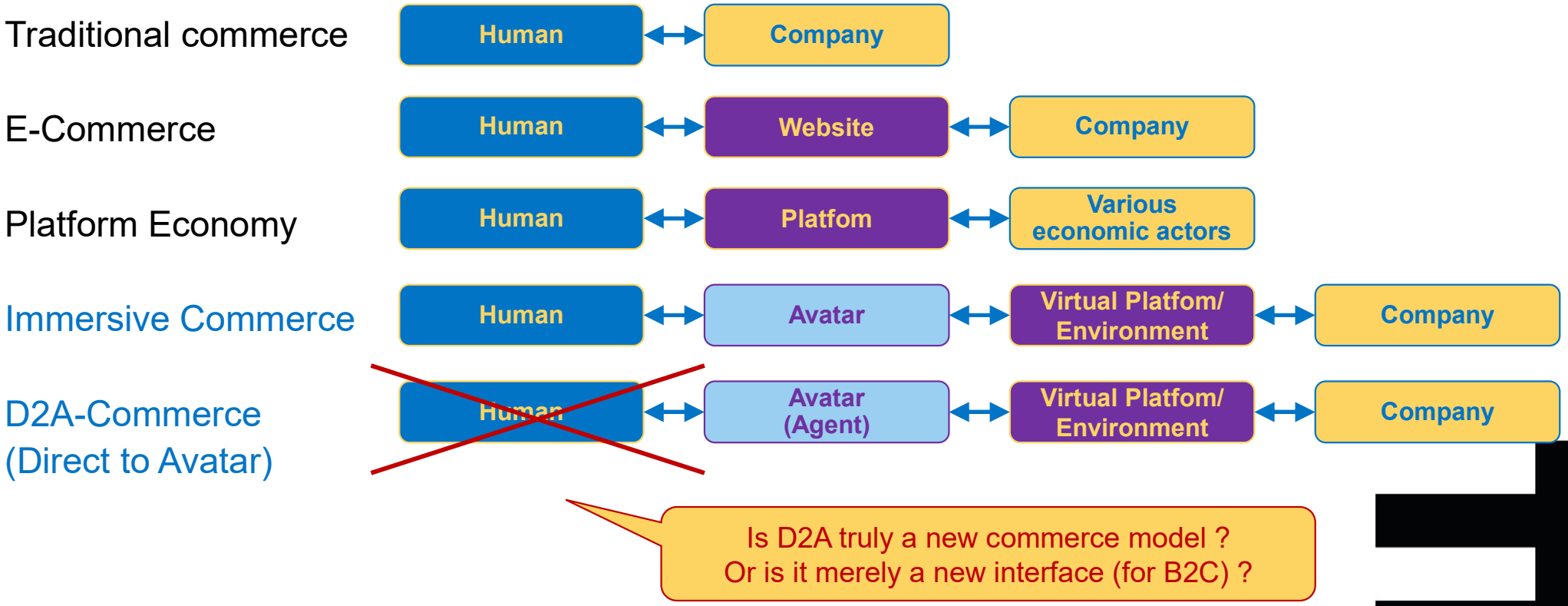


D2A-Commerce (Direct to Avatar) ?

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A look at the evolution of "commerce":



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2 - "Avatar Economy" & Virtual Goods

Are avatars economically relevant ?

And if so, how are they ?

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2 - "Avatar Economy" & Virtual Goods

Are avatars economically relevant ?

Goods/ products for humans: A person uses their avatar to purchase something for the physical world.

Example: My avatar enters the virtual Nike store,
and I instruct it to buy the (real/ physical) sneakers.

From an economic perspective, this remains
primarily a classic B2C transaction.

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2 - "Avatar Economy" & Virtual Goods

Goods/ products for avatars: A person buys something that is used exclusively by their avatar.

Example: I send my avatar to a virtual Nike store,
and we buy virtual sneakers there.

The resulting question is:
→ Who is the "user" of the product?

→ I am still the one paying, …
… but my avatar "uses" the purchased product.

→ Avatars are therefore already quite economically relevant !

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2 - "Avatar Economy" & Virtual Goods

Hybrid goods for …?

Physical and virtual goods are combined.

Example: I send my avatar into the virtual Nike store,
and we buy sneakers there ...
… physical ones for me and virtual ones for him.

→ "Avatar economy" …
… which raises the question:

Would you pay more for a physical product
if your avatar received one, too ?

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2 - "Avatar Economy" & Virtual Goods

A consumer designs his/ her own jacket.
However, the consumer does not own a sewing machine,
so he sends the design to a small company that sews the jacket for him.

A consumer downloads a design model for a jacket from the internet.
He modifies the model and have his avatar wear the altered jacket.
Then he uploads the new model to the internet again, making it available to others.

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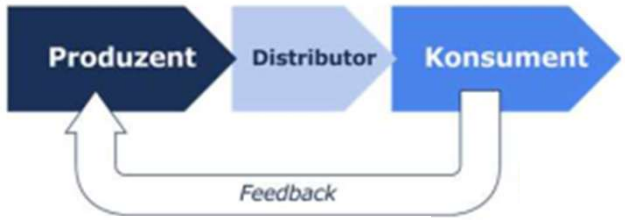
Prosumption: A consumer designs his/ her own jacket.
However, the consumer does not own a sewing machine,
so he sends the design to a small company that sews the jacket for him.
→ The producer and consumer move closer together (in terms of communication).
The means of production remain with the producer.

Produsage: A consumer downloads a design model for a jacket from the internet.
He modifies the model and have his avatar wear the altered jacket.
Then he uploads the new model to the internet again, making it available to others.
→ The consumer becomes a producer themselves.

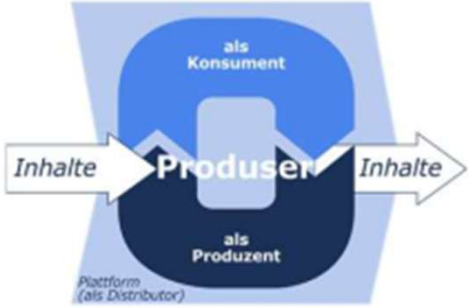
Modusage: A consumer downloads a design model for a jacket from the internet.
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Then he sends the new model to a small company that sews the jacket for him. The consumer sells this jacket in his own shop or on eBay.
He also uploads the digital model back to the internet and offers it there.
→ Here, too, the consumer becomes a producer.
However, he crosses worlds: the real world and the digital world.

2 - "Avatar Economy" & Virtual Goods

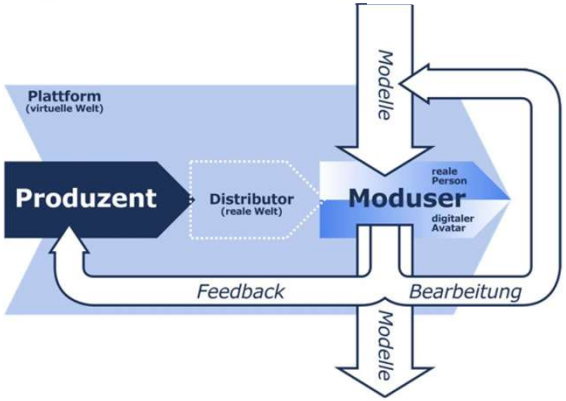
Prosumption:



Produsage:



Modusage:



3 - What does D2A-commerce mean ?

B2C: Company ↔ Customer

D2A: Company ↔ Avatar ↔ Human

→ The avatar represents a new way of addressing the audience: a mediator

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3 - What does D2A-commerce mean ?

But why would a company communicate with my avatar …
… and not with me ?

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3 - What does D2A-commerce mean ?

Lots of reasons a company wants so communicate with my avatar …
… and not with me !

Identity ?	The avatar as a representative of interests or characteristics.
Context ?	The avatar is situated within a specific virtual environment.
Personalization ?	Offers can be specifically tailored to the avatar.
Presence ?	Products can be experienced in a "spatial" way (almost "like in real life").
Continuity ?	A (persistent) avatar can maintain the same identity across various situations.
Agency ?	An intelligent avatar can filter, evaluate, or process offers.

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4 - What is an avatar ?



4 - What is an avatar in "Commerce" ?



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4 - What is an avatar in "Commerce" ?

Interface ?

Product ?

Data set ?

Representant ?

Customer ?

Agent ?



5 - From Avatar to Autonomous Economic Actor

Level 1 Representation: The avatar represents me.

→ Example: My avatar wears clothing/ accessories I have chosen.

→ Decision-maker: Human

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5 - From Avatar to Autonomous Economic Actor

Level 1	Representation:	The avatar represents me.
Level 2	Personalization:	The avatar becomes a source of information about me.
	→ Example:	The system identifies, for instance, style, interests, or context and tailors offers accordingly.
	→ Decision-maker:	Human
	→ Data protection issue:	Does information about my avatar constitute information about me ?

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5 - From Avatar to Autonomous Economic Actor

Level 1	Representation:	The avatar represents me.
Level 2	Personalization:	The avatar becomes a source of information about me.
Level 3	Mediation:	The avatar acts as an intermediary between the company and me.
	→ Example:	The avatar filters advertising:
		"Do not show me any gambling advertisements." "Show only sustainable products."
	→ Decision-maker:	Still the human, but …
		… the company no longer communicates simply through the avatar to the human.
		The avatar stands between the company and the human.

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Level 3	Mediation:	The avatar acts as an intermediary between the company and me.
Level 4	Support:	The avatar evaluates offers on my behalf.

→ Example: Company: "This jacket costs US$180."

My avatar: Similar product: US$ 145
Sustainability rating: low
"This does not align with your preferences !"
"Don't buy it !"

→ Decision-maker: Still the human, but …
… the avatar provides assistance with the evaluation.

It acts as a consumer agent, integrated into the decision-making process!

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Level 5	Agency	The avatar is authorized to act on my behalf.
	→ Example:	Maximum budget: €150. Preferred delivery: before Friday. No materials of animal origin.

My avatar negotiates autonomously with several suppliers and…
… ultimately purchases a product.!

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So, who is the decision maker ?

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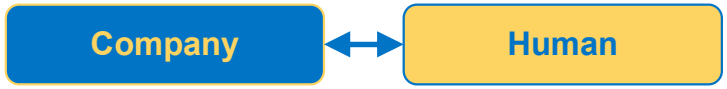
And: who actually made the purchase ?

So, who is the decision maker ?

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6 - D2A transforms relationships

Traditional:



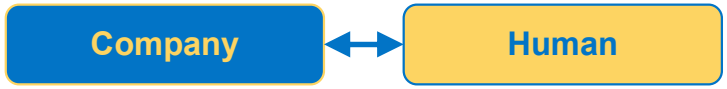
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6 - D2A transforms relationships

Traditional:



Digital:



Digital Autonomy:



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6 - D2A transforms relationships

Traditional: Company ↔ Human

Digital: Company ↔ Avatar ↔ Human

Digital Autonomy: Company ↔ Avatar (Agent) ↔ Human

extending to: Company ↔ Store Avatar/ Agent ↔ Customer Avatar/ Agant ↔ Human

→ the human merely defines goals, preferences, and boundaries

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6 - D2A transforms relationships

D2A commerce is evolving from **marketing directed to avatars** towards **commerce between agents** that act independently on behalf of individuals and companies.

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Digital: Company ↔ Avatar ↔ Human

Digital Autonomy: Company ↔ Avatar (Agent) ↔ Human

extending to: Company ↔ Store Avatar/ Agent ↔ Customer Avatar/ Agant ↔ Human

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9 - What does all that mean ?

Is D2A really a new (commerce) model?

→ Or is it perhaps simply B2C - but just with an avatar in its center?

As long as a human being is the one making the decisions,
D2A remains, at its core, a specific form of B2C.

However, if persistent avatars are capable of …

… storing data, …
… filtering offers, …
… representing interests, …
… negotiating independently, and …
… executing transactions, …

… a qualitatively different economic mediation structure emerges.

9 - Finale

From passive customer to independent agent

Step 1: The avatar is the merchant's objective.

Step 2: The avatar serves as a communication interface.

Step 3: The avatar becomes an intermediary between merchant and customer.

Step 4: The avatar acts as the customer's assistant.

Step 5: The avatar functions as an autonomous agent.

→ But does the avatar truly act as an independent economic agent?

→ The open question still is: If avatars become permanent digital representatives of human beings, do they become a new economic target group?



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That‘s IT

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