



# Composable AI and its impact on Enterprise Architecture

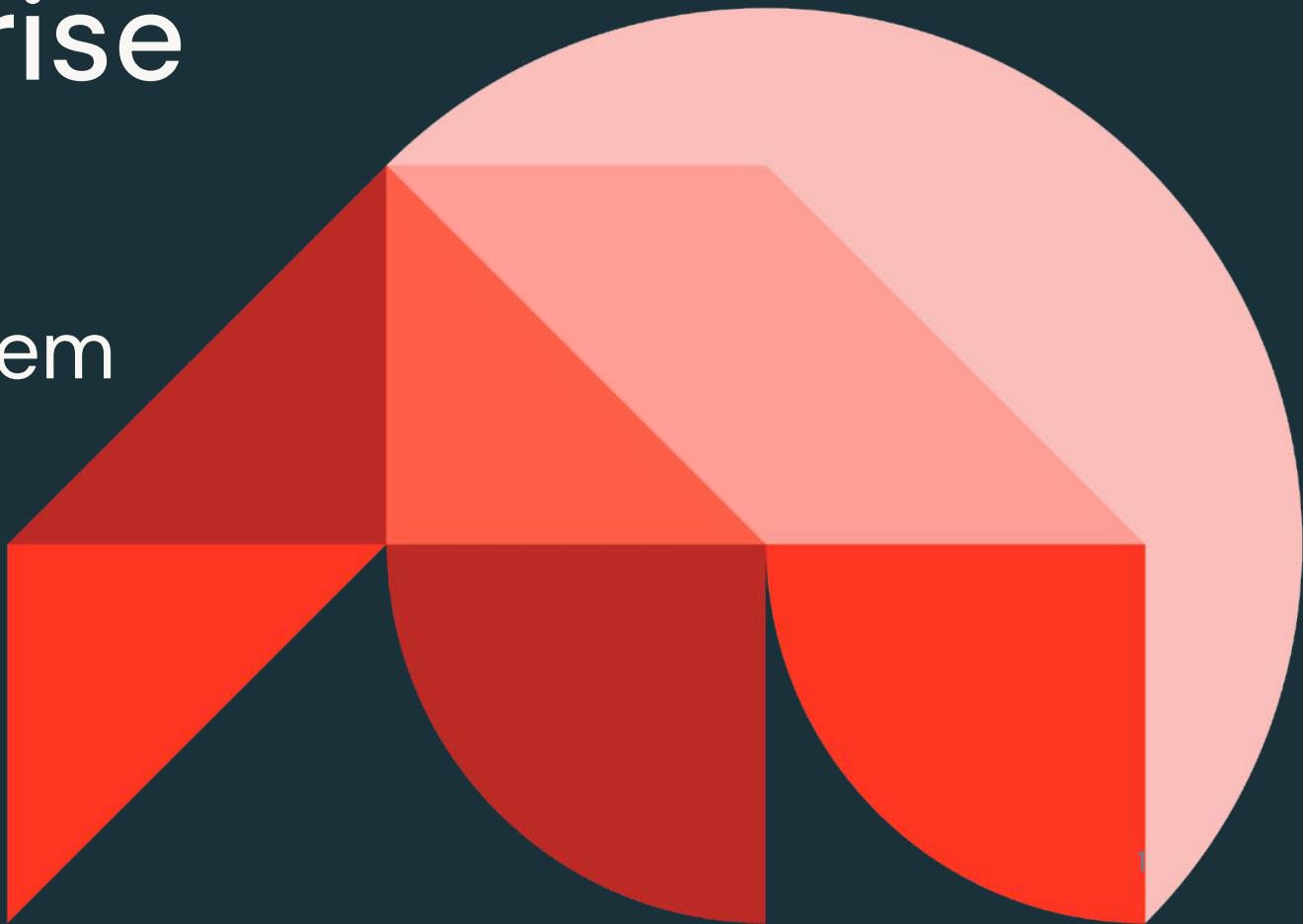
Towards an Operating System  
for Data & AI

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Felix Mutzl

Wrocław | May 2025

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Summer 1977



A SECRET HISTORY OF THE OLLIE  
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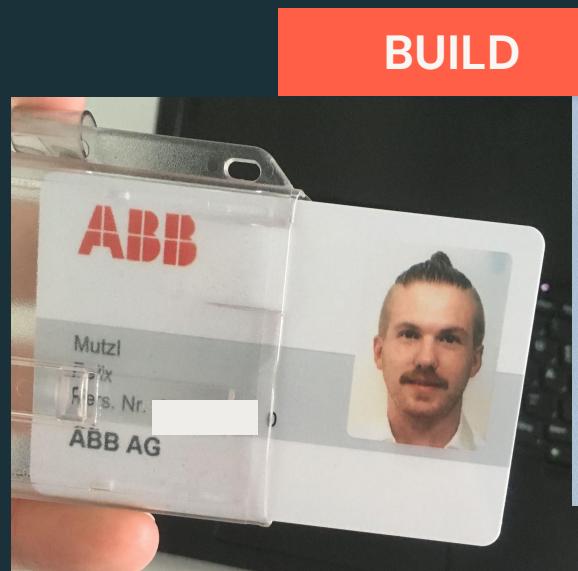


Uhm... spring 2025



# print("hello world!")

Grew up in manufacturing. Built data platforms.



BUILD



ADOPT



# History of Databricks



**2013**

Founded at  
UC Berkeley

**2015**

Pivot from PLG to  
Enterprise B2B

**2018-19**

Launched more open  
Formats + on Azure

**2020-21**

Defined Lakehouse,  
and began scaling  
(2 rounds in 2021)

**2022-23**

Expand Gen AI and  
Data Intelligence  
(Series I in Nov, 23)

**2024-25**

SAP Databricks  
(still Private with  
\$10b Series J)



# Data & AI is a journey



how can I try out the data intelligence platform?

## ⌚ Pro Search

✓ Search for information on how to try out a data intelligence platform

✓ Look for specific platforms that offer trial or demo versions

✓ Find user reviews or experiences of trying out data intelligence platforms

## ✖ Sources

What is a data intelligence platform | Databricks Blog

databricks · 1

Databricks Data Intelligence Platform

databricks · 2

BigID Data Intelligence Platform: How It Works

bigid · 3



View 3 more

## ✳ Perplexity

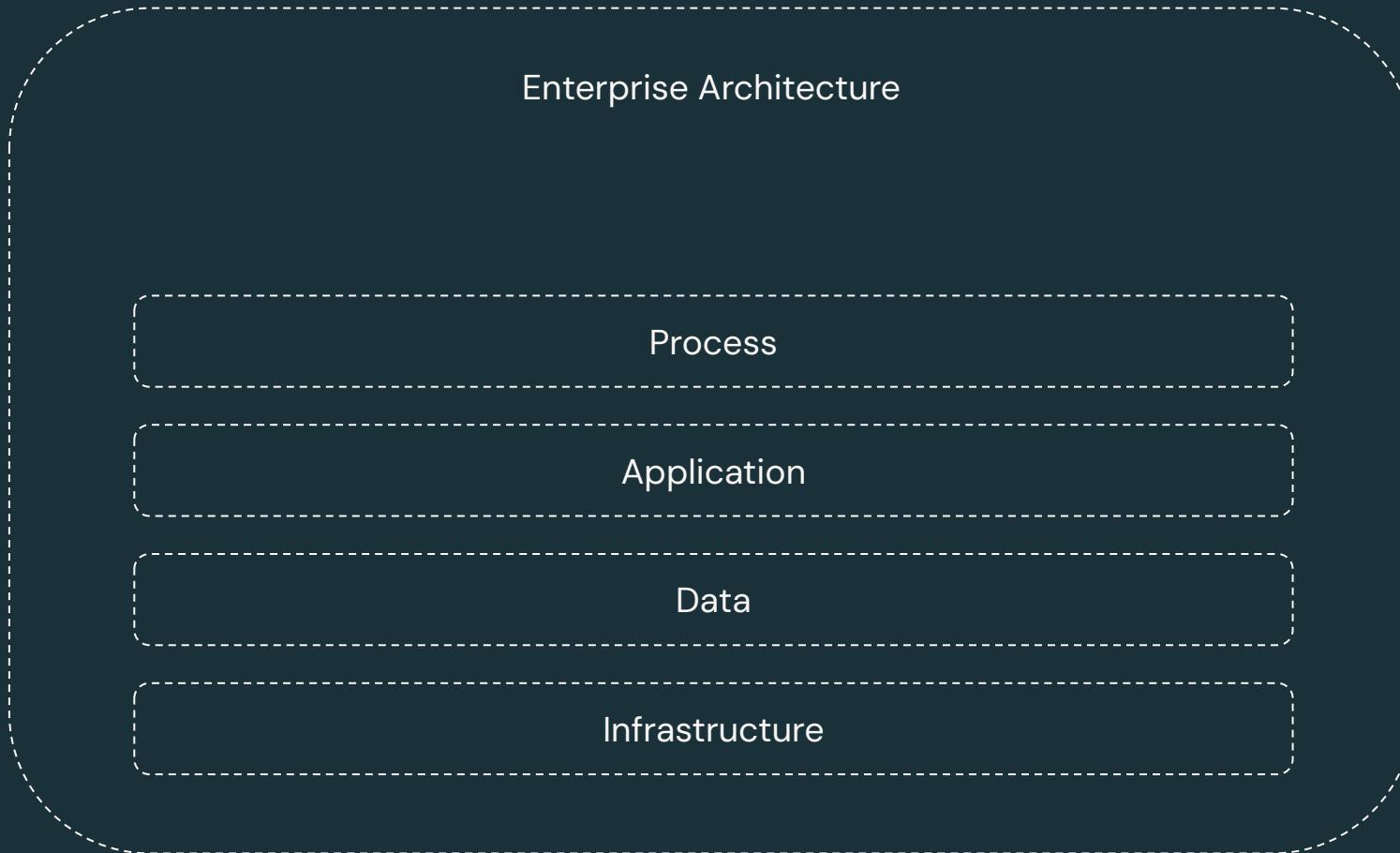
To try out a data intelligence platform, you can follow these general steps based on the platforms mentioned in the search results:

### 1. Databricks Data Intelligence Platform:

- Databricks offers a free trial of its Data Intelligence Platform. You can sign up for this trial to explore its features and capabilities. The platform is built on a lakehouse architecture, combining data and AI to provide a unified foundation for data management and governance <sup>2</sup>.
- Visit the Databricks website and look for the "Try for free" option to start your trial <sup>2</sup>.



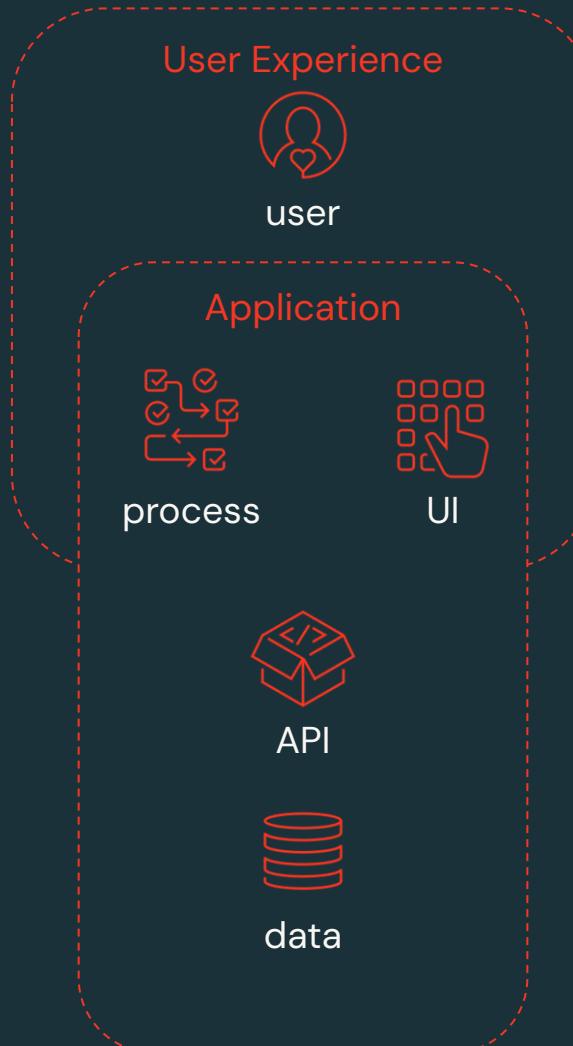
# We buy computers and think in boxes.



yesterday  
today  
tomorrow



# We buy computers and think in boxes.



yesterday  
today  
tomorrow



# Disruption is happening everywhere.



yesterday  
today  
tomorrow

Unified UX

From messy inbox to unified UX (think of “superapps”)

Commoditized AI

Cloud economies of scale (availability and cost)

Unified storage

From data silos to unified storage



# Theme 1: Commoditization of (general) AI

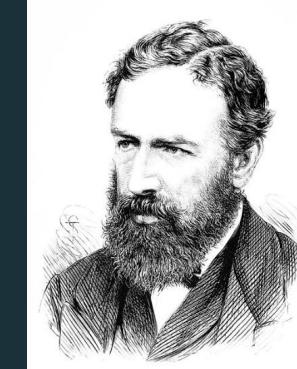
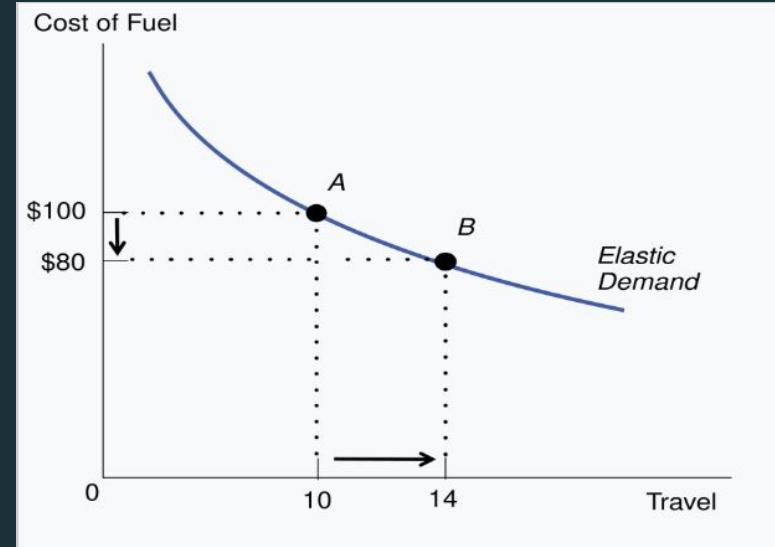


yesterday  
today  
tomorrow

Unified UX

Commoditized AI

Unified storage



William Stanley Jevons  
(1865)

# Theme 1: Commoditization of (general) AI

yesterday  
today  
tomorrow

Unified UX

Commoditized AI

Unified storage

## Mosaic's Law

The amount of learning per dollar will quadruple every year.

Steve Jurvetson @FutureJurvetson

Ah, he is referring to AI advancing at Moore's Law squared. The hardware is still 2x per year, the algo advances are another 2x, so  $2^2 = 4x$  per year. We called it Mosaic's Law

Introducing MosaicML — Accelerating AI Algorithmically For All

Building on a 4x advantage, we expect "Mosaic's Law" for algorithmic advances to quadruple learning/\$ every year.

... Show more

Training Compute Time (Petabytes-days)

TD-Gammon v2.1

LeNet-5

BILSTM for Speech

DQN

Deep Belief Nets and layer-wise pretraining

AlexNet

VGG

ResNets

BERT

Neural Machine Translation

Tesla Autopilot

AlphaGoZero

2x every two years

10x per year

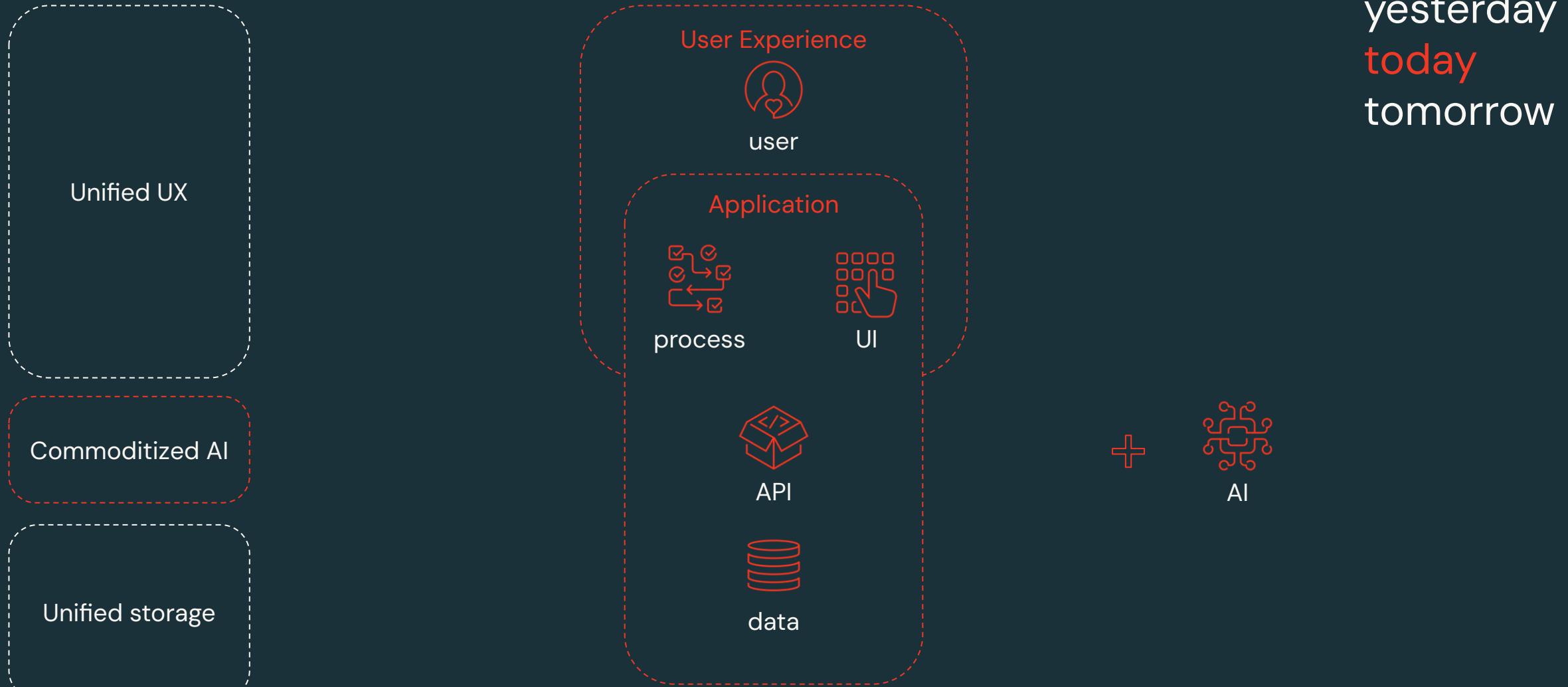
Training efficiency monitor

\$37.73

4:15 pm · 12 Jan 2025 · 1,260 Views



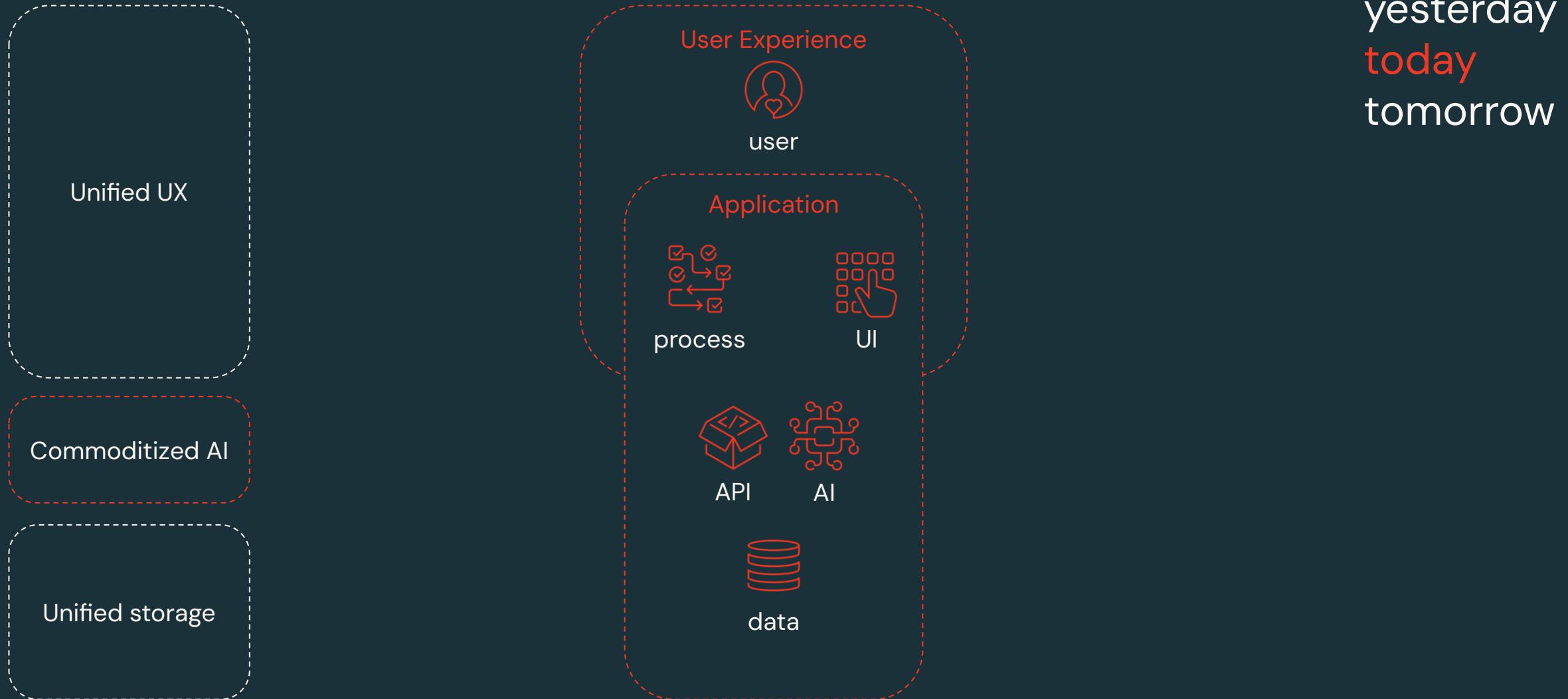
# Theme 1: Commoditization of (general) AI



“I don’t care about the standard  
benchmarks;  
I want the model to do well on my  
data.”

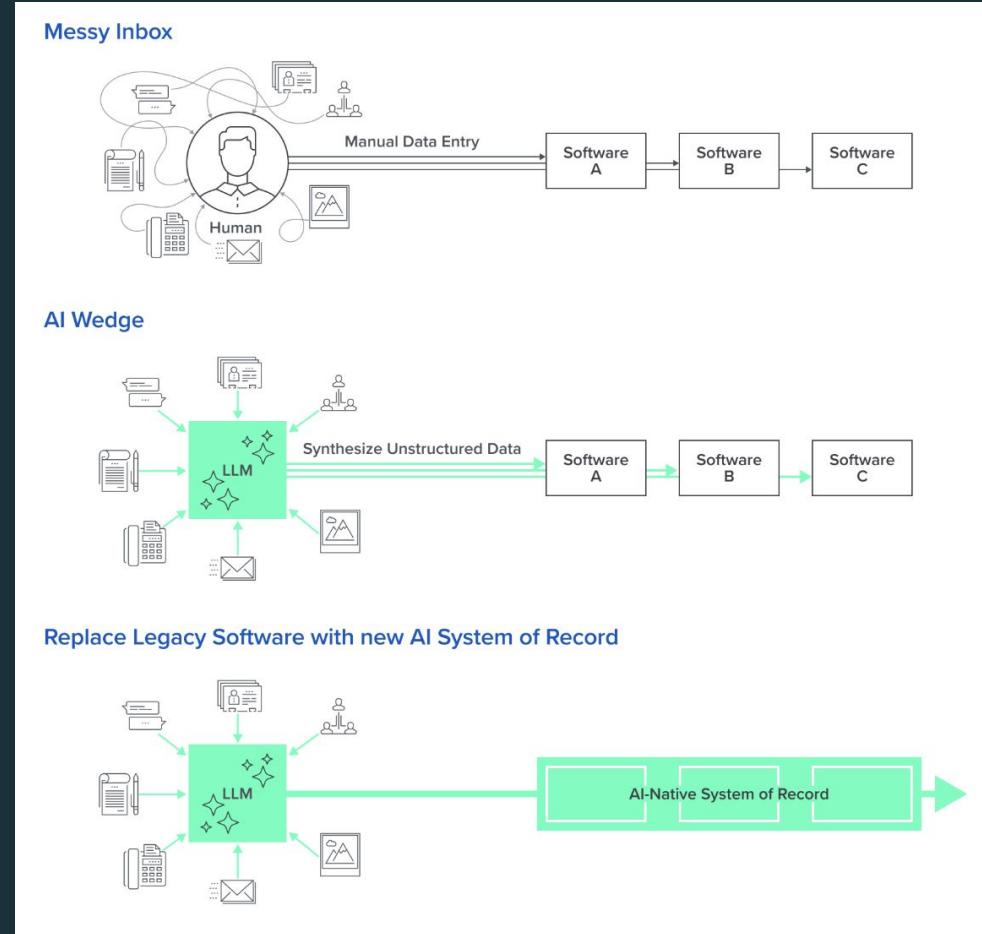
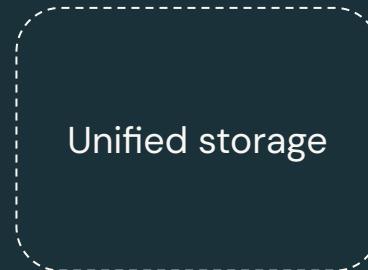
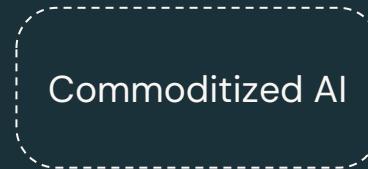


# Theme 1: Commoditization of (general) AI





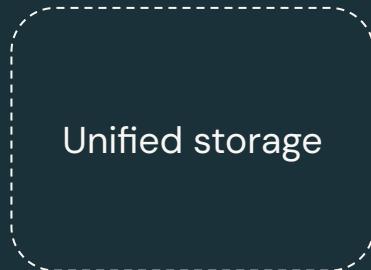
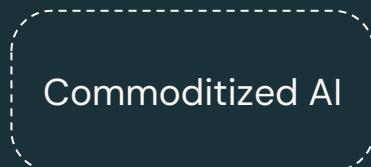
# Theme 2: Headless Applications



yesterday  
today  
tomorrow



# Theme 2: Headless Applications



yesterday  
today  
tomorrow

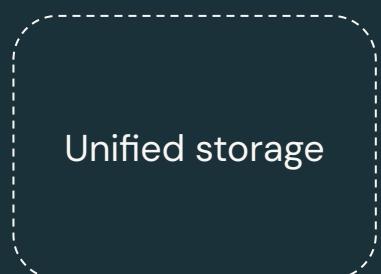
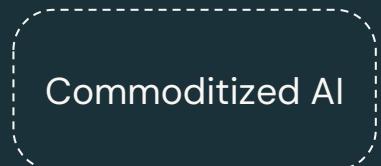
What is a UI?

**A way for the user to express intent.**

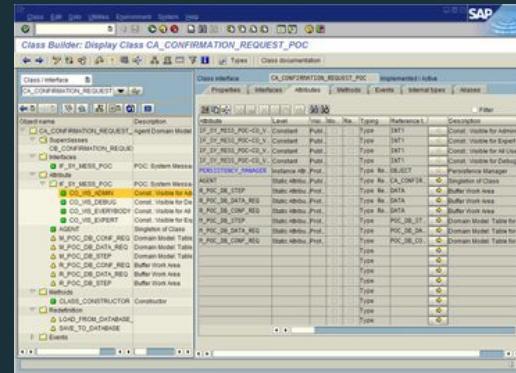
That intent can be very detailed  
(writing code) or very vague (with  
swipe on a phone)



# Theme 2: Headless Applications



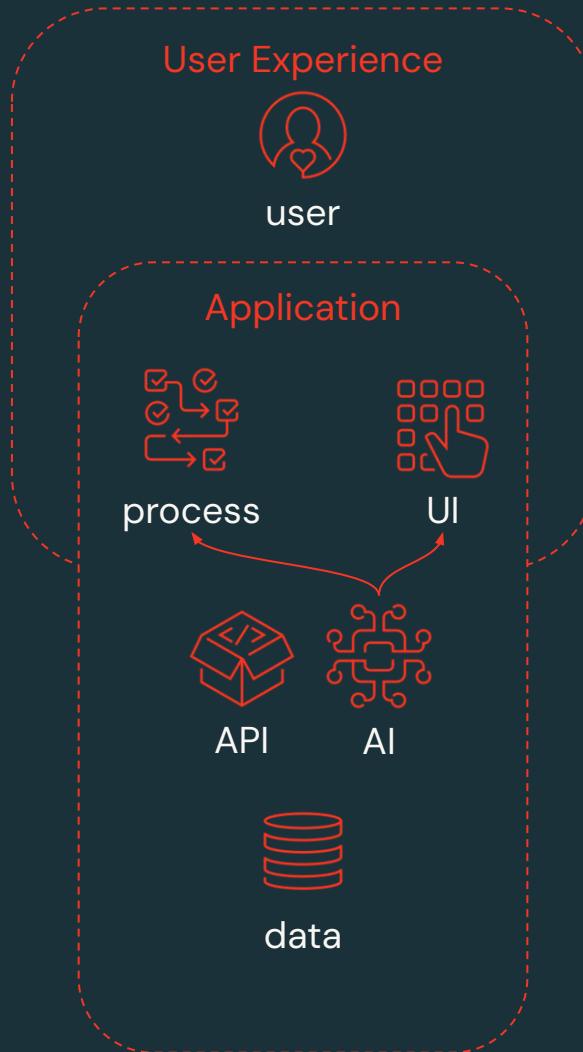
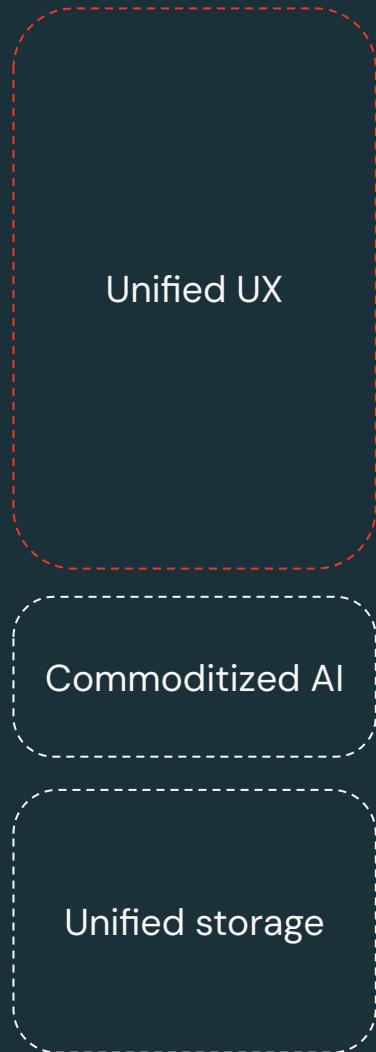
Very precise



Very accessible

yesterday  
today  
tomorrow

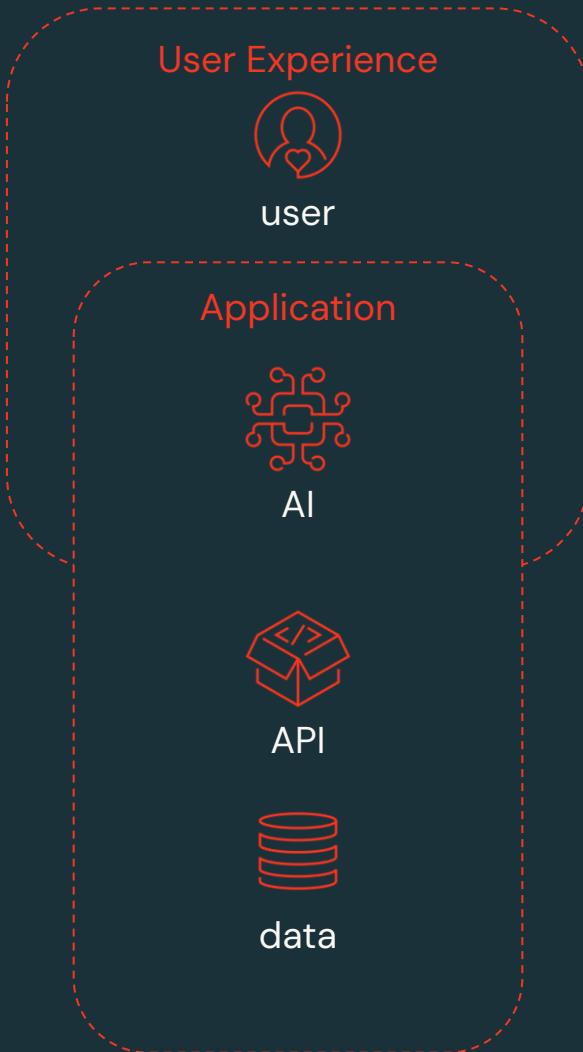
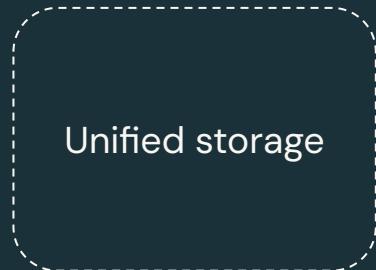
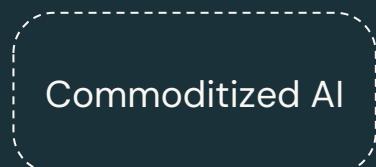
# Theme 2: Headless Applications



yesterday  
today  
tomorrow



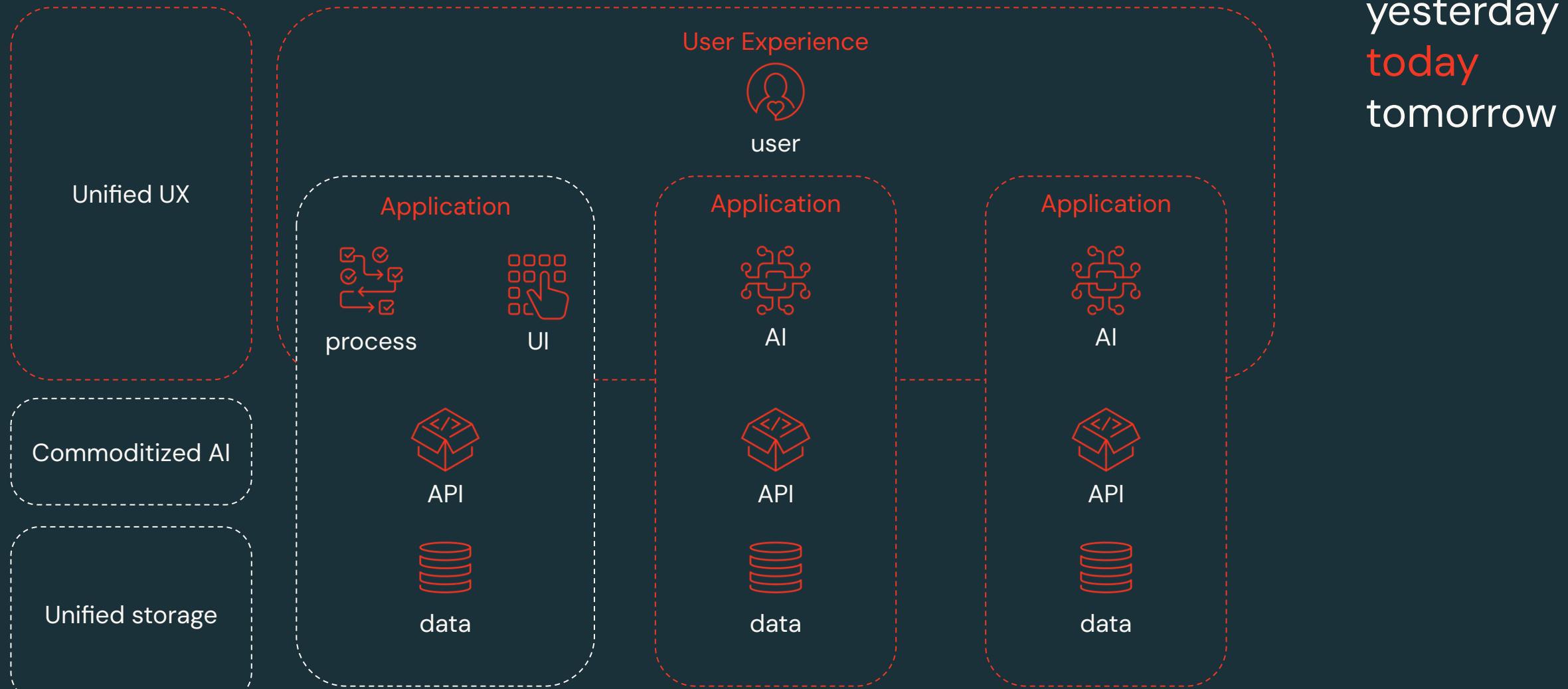
# Theme 2: Headless Applications



yesterday  
today  
tomorrow



# Theme 2: Headless Applications



# It's usually worse than it seems

yesterday  
today  
tomorrow

The high costs and  
proprietary formats drive at  
least a **30% premium** in  
data infrastructure costs

# Theme 3: Bottomless storage



yesterday  
today  
tomorrow

Unified UX

Commoditized AI

Unified storage

## What Is a Lakehouse?



by Ben Lorica, Michael Armbrust, Reynold Xin, Matei Zaharia and Ali Ghodsi

January 30, 2020 in Engineering Blog

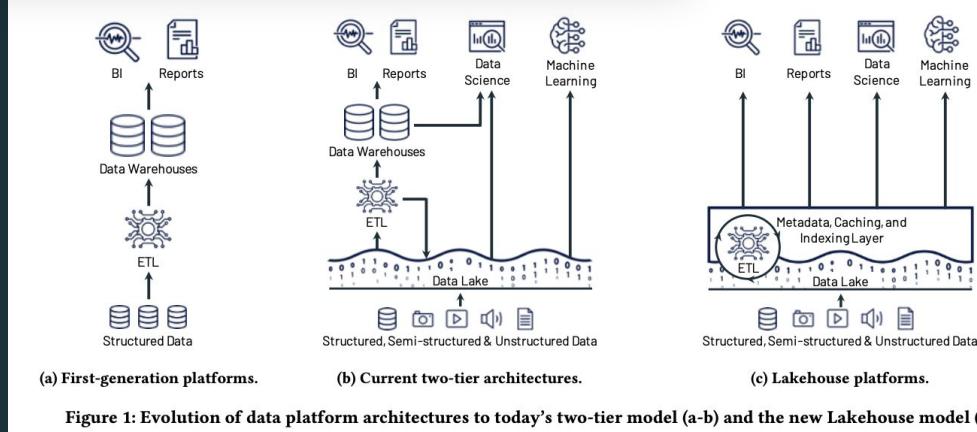
Share this post



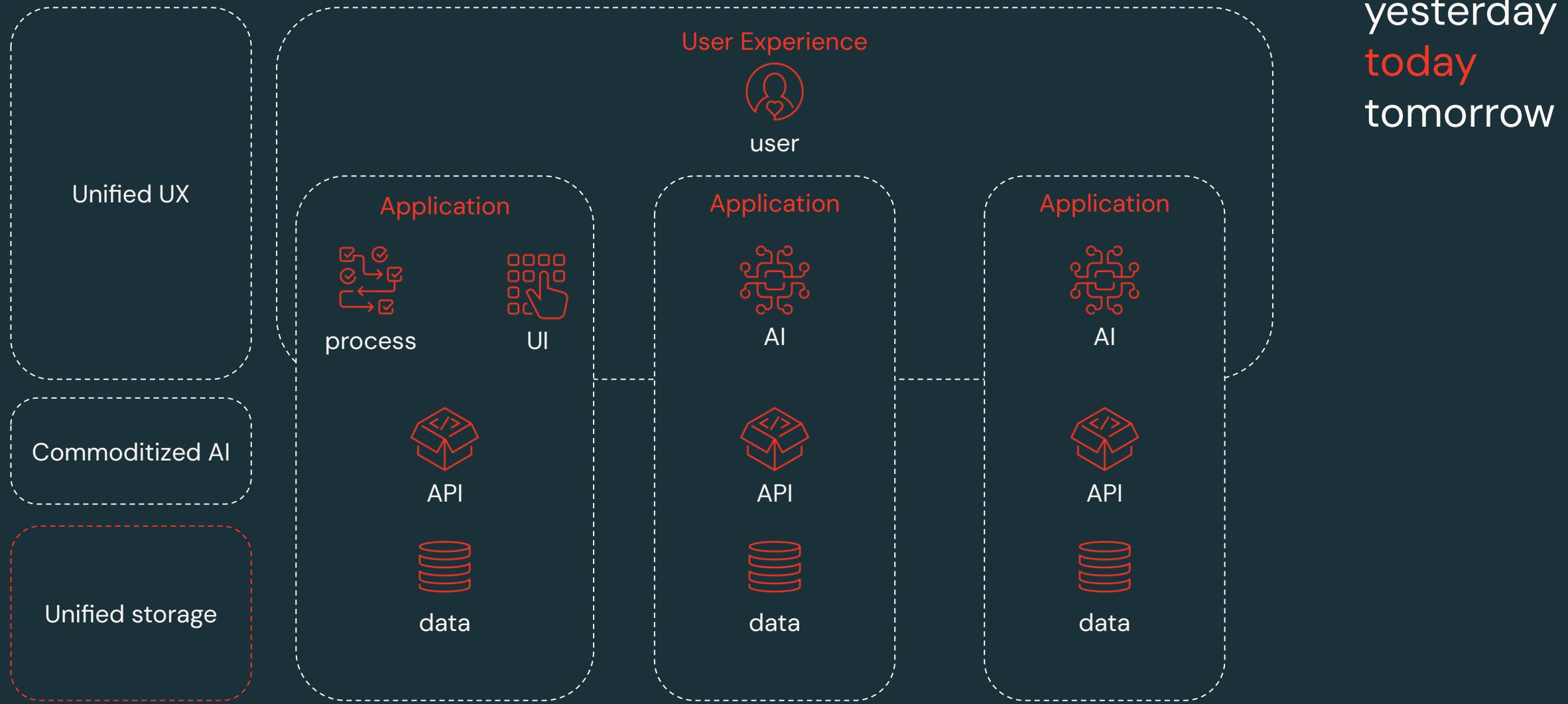
Over the past few years at Databricks, we've seen a new data management architecture that emerged independently across many customers and use cases: [the lakehouse](#). In this post we describe this new architecture and its advantages over previous approaches.

Data warehouses have a [long history](#) in decision support and business intelligence applications. Since its inception in the late 1980s, data warehouse technology continued to evolve and MPP architectures led to systems that were able to handle larger data sizes. But while warehouses were great for structured data, a lot of modern enterprises have to deal with unstructured data, semi-structured data, and data with high variety, velocity, and volume. Data warehouses are not suited for many of these use cases, and they are certainly not the most cost efficient.

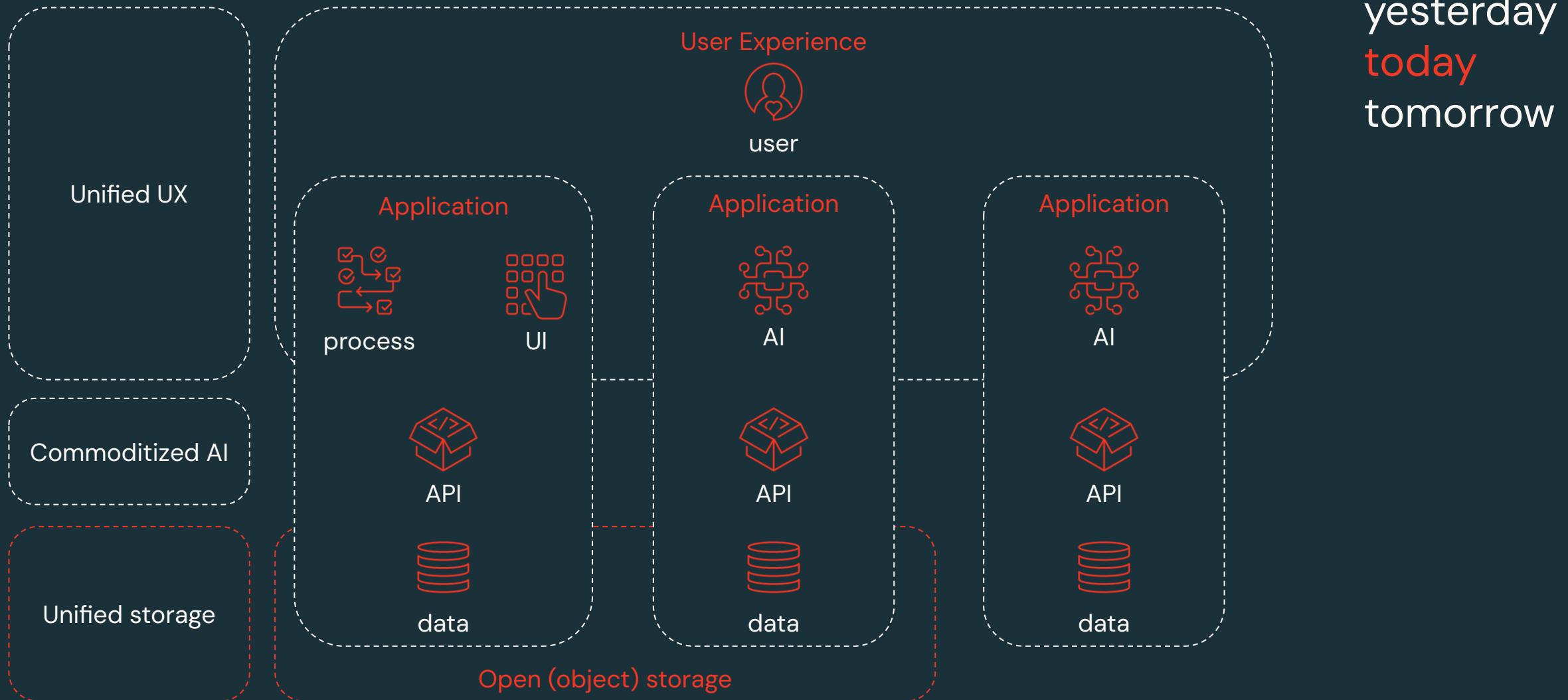
Michael Armbrust, Ali Ghodsi, Reynold Xin, and Matei Zaharia



# Theme 3: Bottomless storage



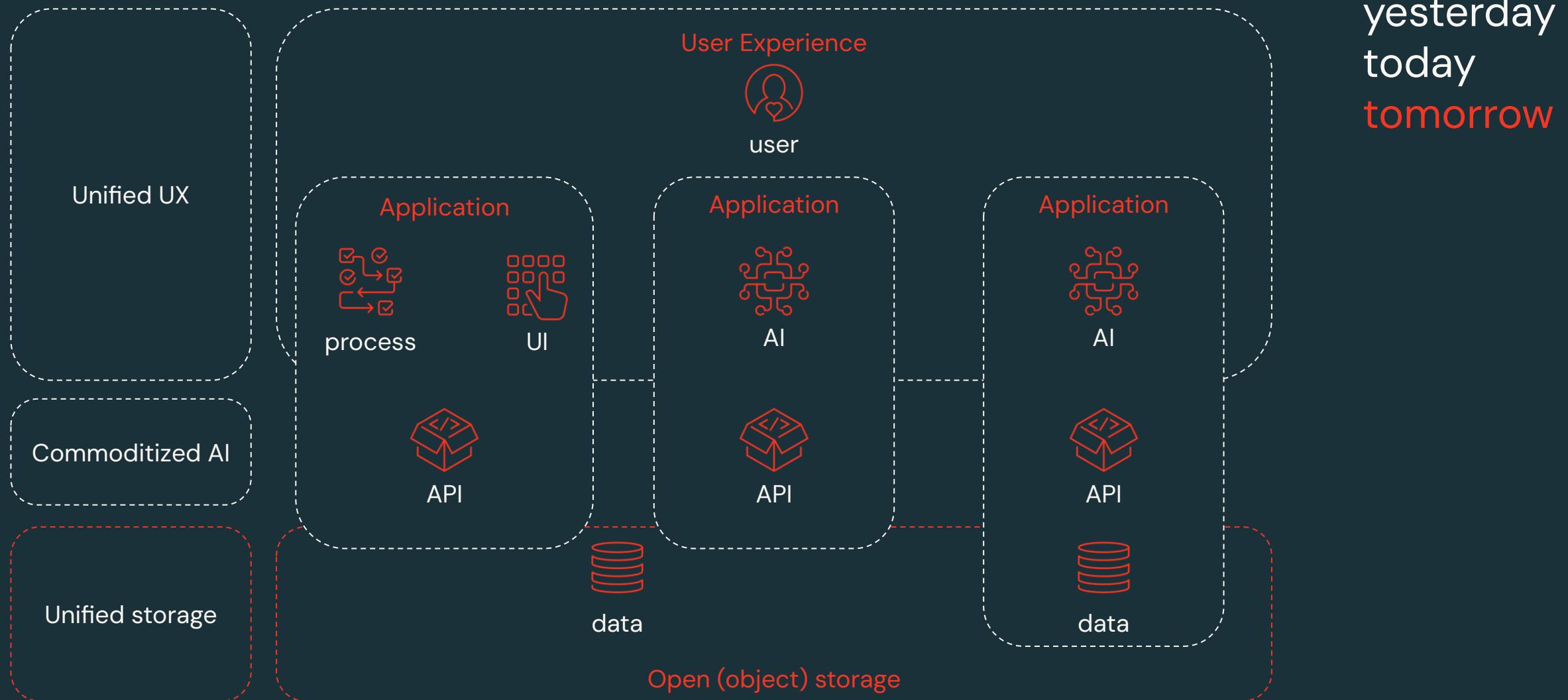
# Theme 3: Bottomless storage



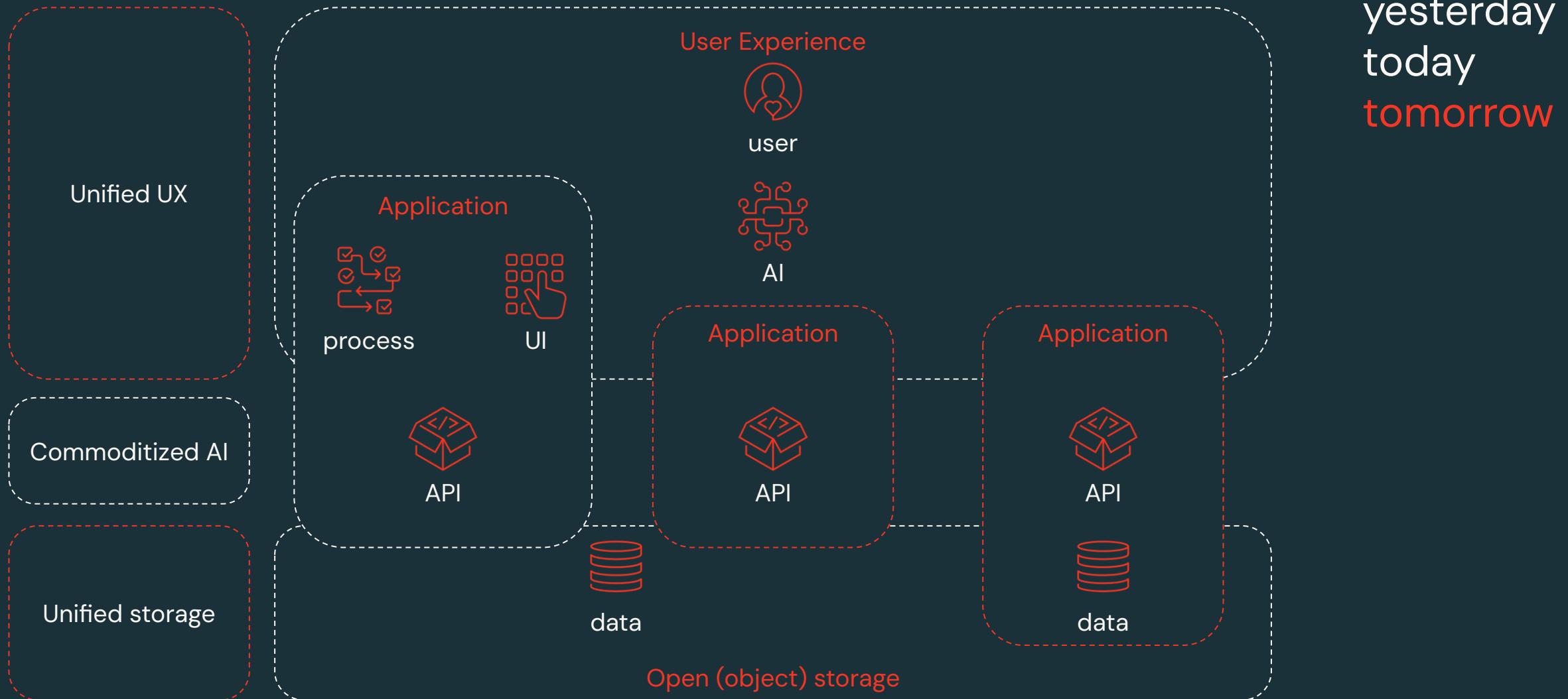
...so where might this take us?



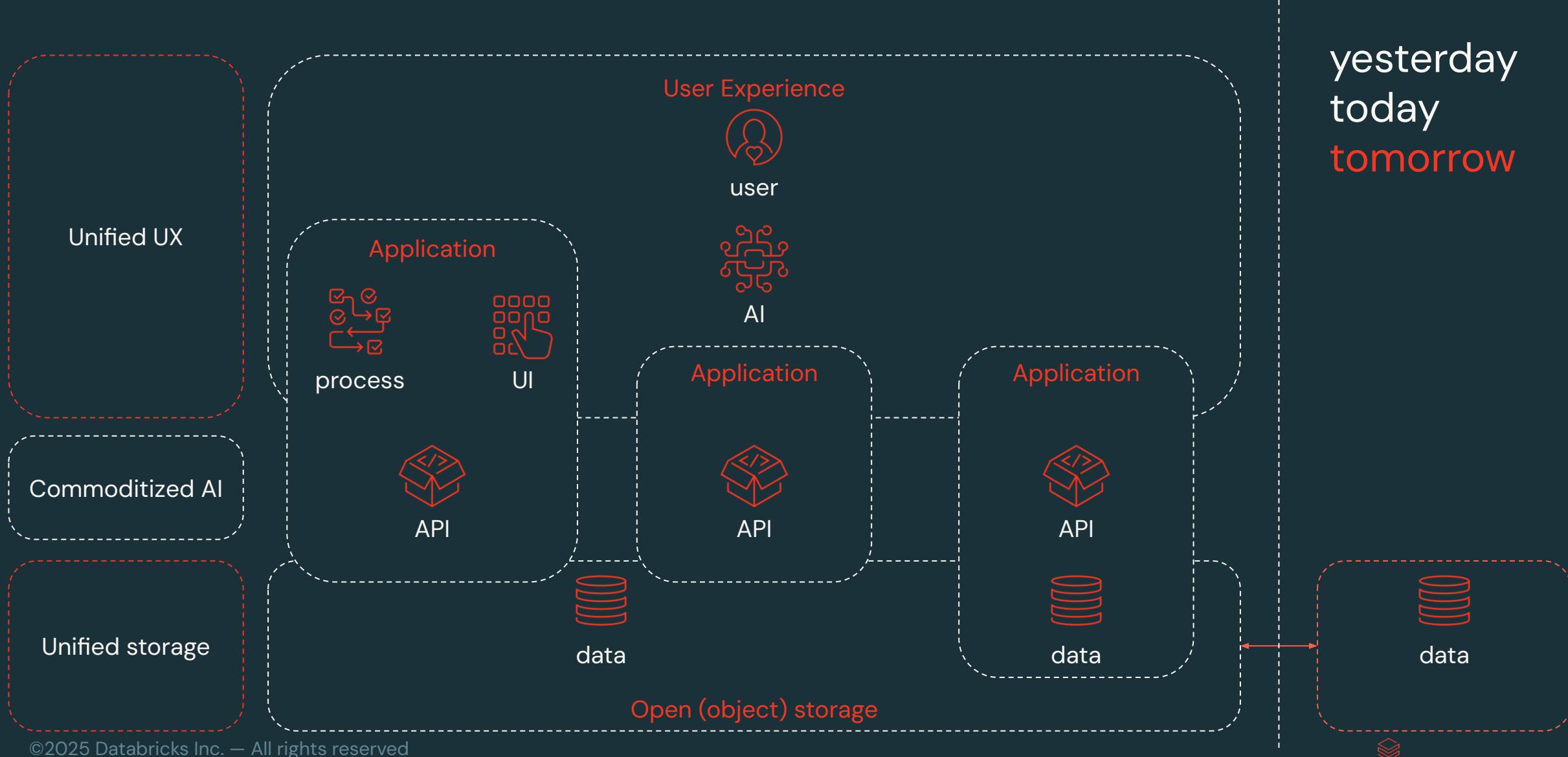
# Outlook: AI native storage



# Outlook: AI centric UX



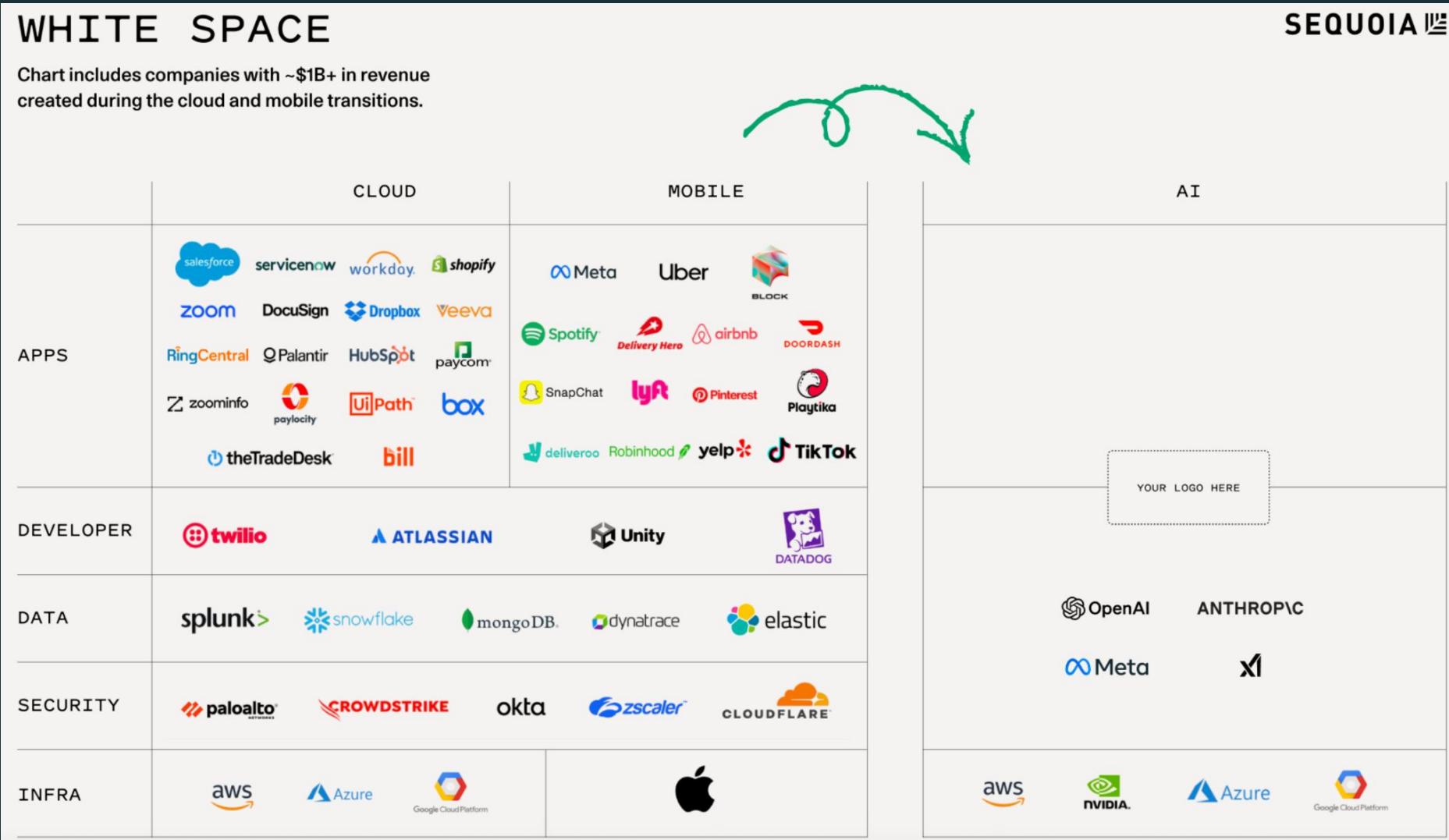
# Outlook: new data economies



# Outlook: data economies

## WHITE SPACE

Chart includes companies with ~\$1B+ in revenue created during the cloud and mobile transitions.



# databricks DATA+AI SUMMIT

The premier event for the global data, analytics and AI community returns to San Francisco June 9–12. Four days packed with keynotes by industry leaders and visionaries, technical sessions, hands-on training and networking opportunities.

**20K+**

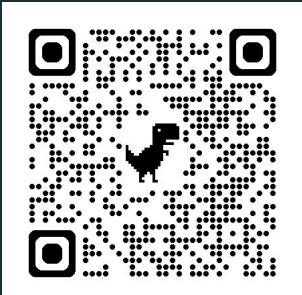
ATTENDEES  
ON SITE

**700+**

BREAKOUT  
SESSIONS

**20+**

TRAINING  
COURSES



**REGISTER NOW**

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WORLD'S LARGEST DATA,  
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CONFERENCE

IN-PERSON  
JUNE 9-12  
SAN FRANCISCO



**Virtual Event //** June 11 – 12 // Free live stream of keynotes + select sessions // [Register Now](#)

2  
Now



## (DEVELOPER) PRODUCTIVITY, DATA INTELLIGENCE AND BUILDING AN AI APPLICATION

### AUDITORIUM

Tue 3:30 pm - 4:30 pm

Intermediate English AI/ML

"Hey, we just bought this awesome AI and it solved all of our problems" - said no one ever. The field of tech is developing at a breathtaking speed - boosted by (the many promises of) AI - and we're witnesses to a user experience that's about to fundamentally change. Together, we dive into the shift from "general intelligence" to "data intelligence", lessons learned along the way, practical examples, crunch some data, build AI models and build a data product that helps cater insight to knowledge workers in my company when and where they need it.





# databricks



# Outlook

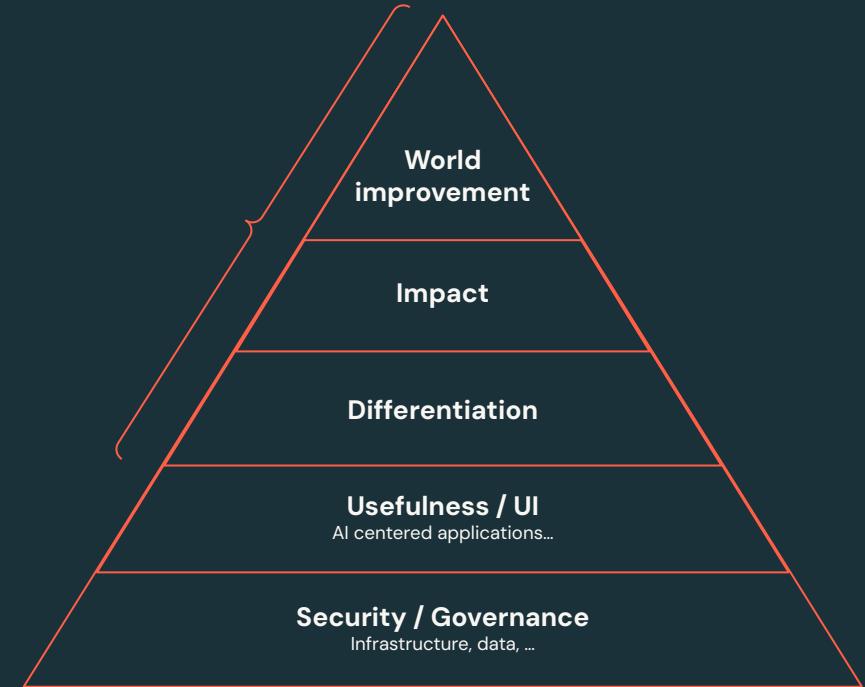
## AI economies

Change is underway...

- Open standards / protocols
- Consolidation of UX
- Regulation and trust (in AI)

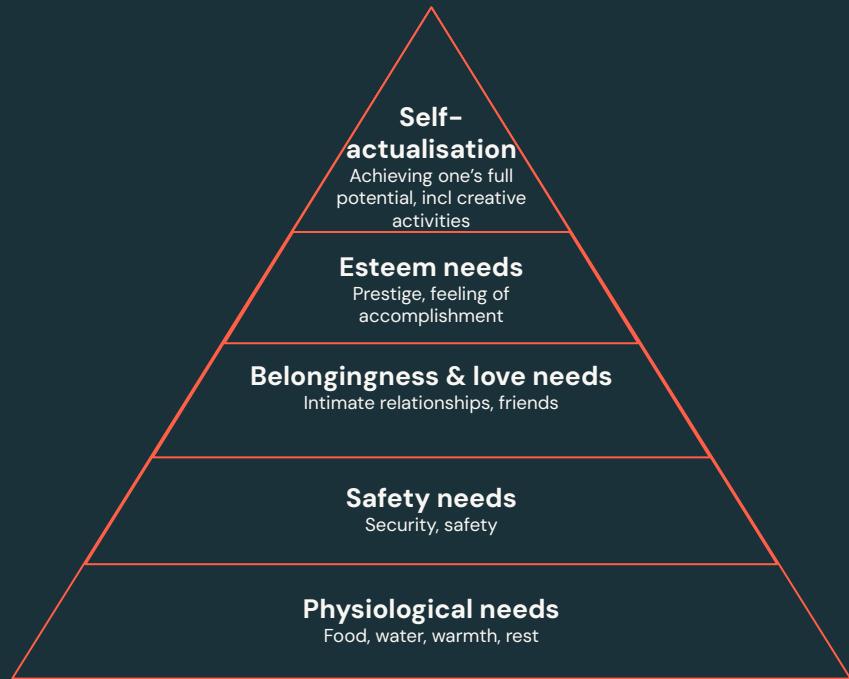
... and not confined to just one enterprise

- Autonomy/automation
- AI driven economies and GDP

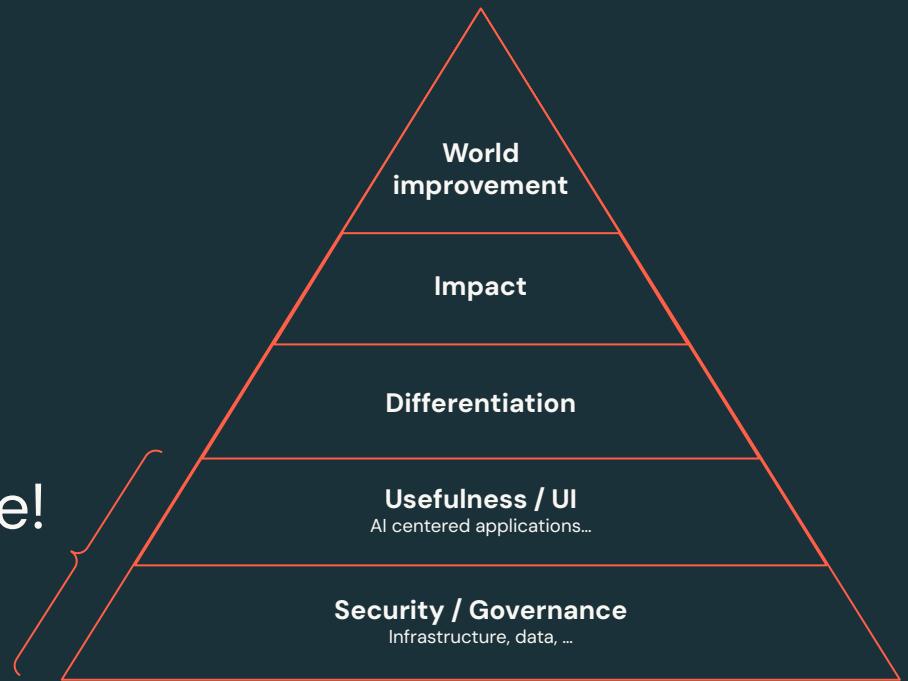


# Outlook

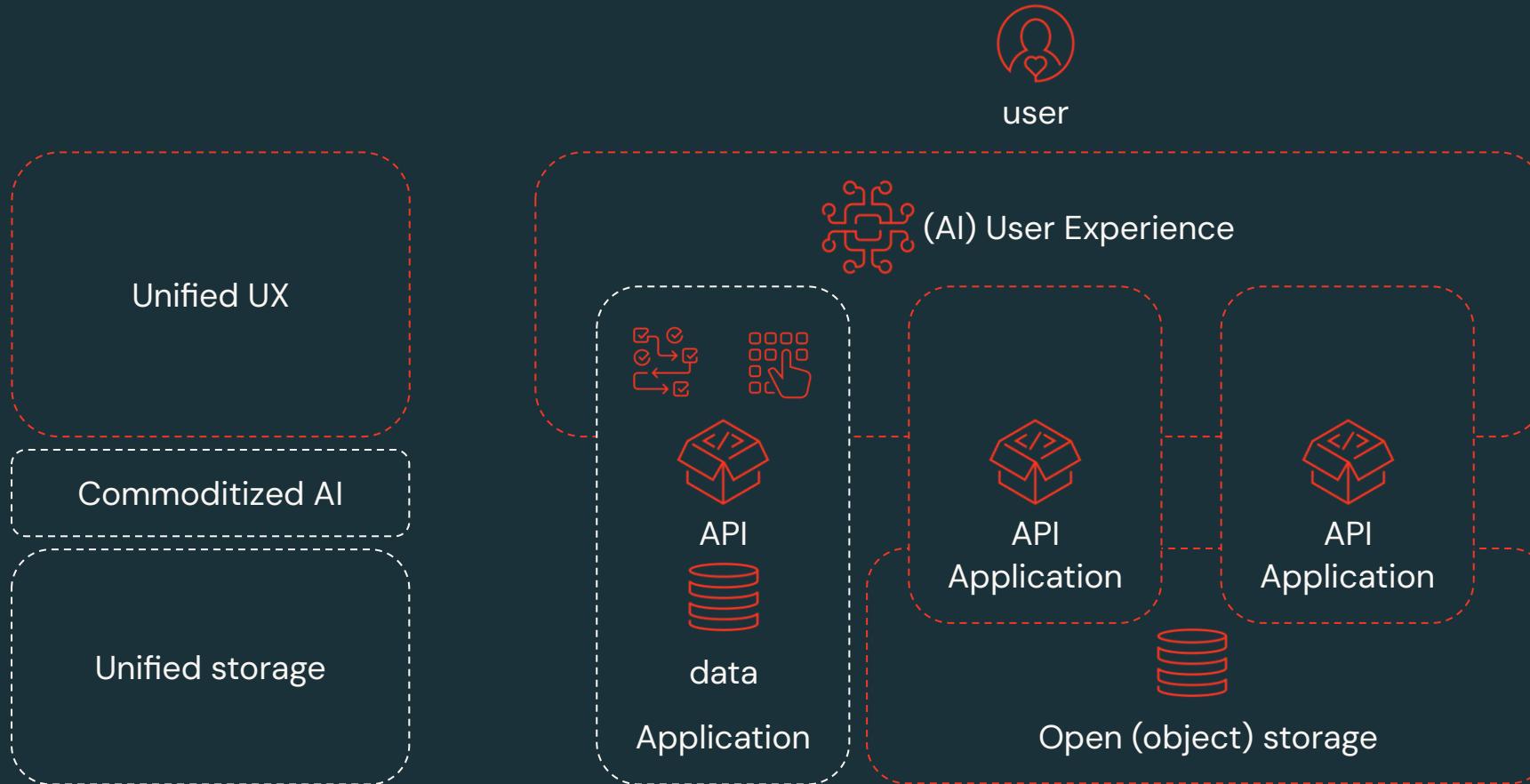
## AI economies



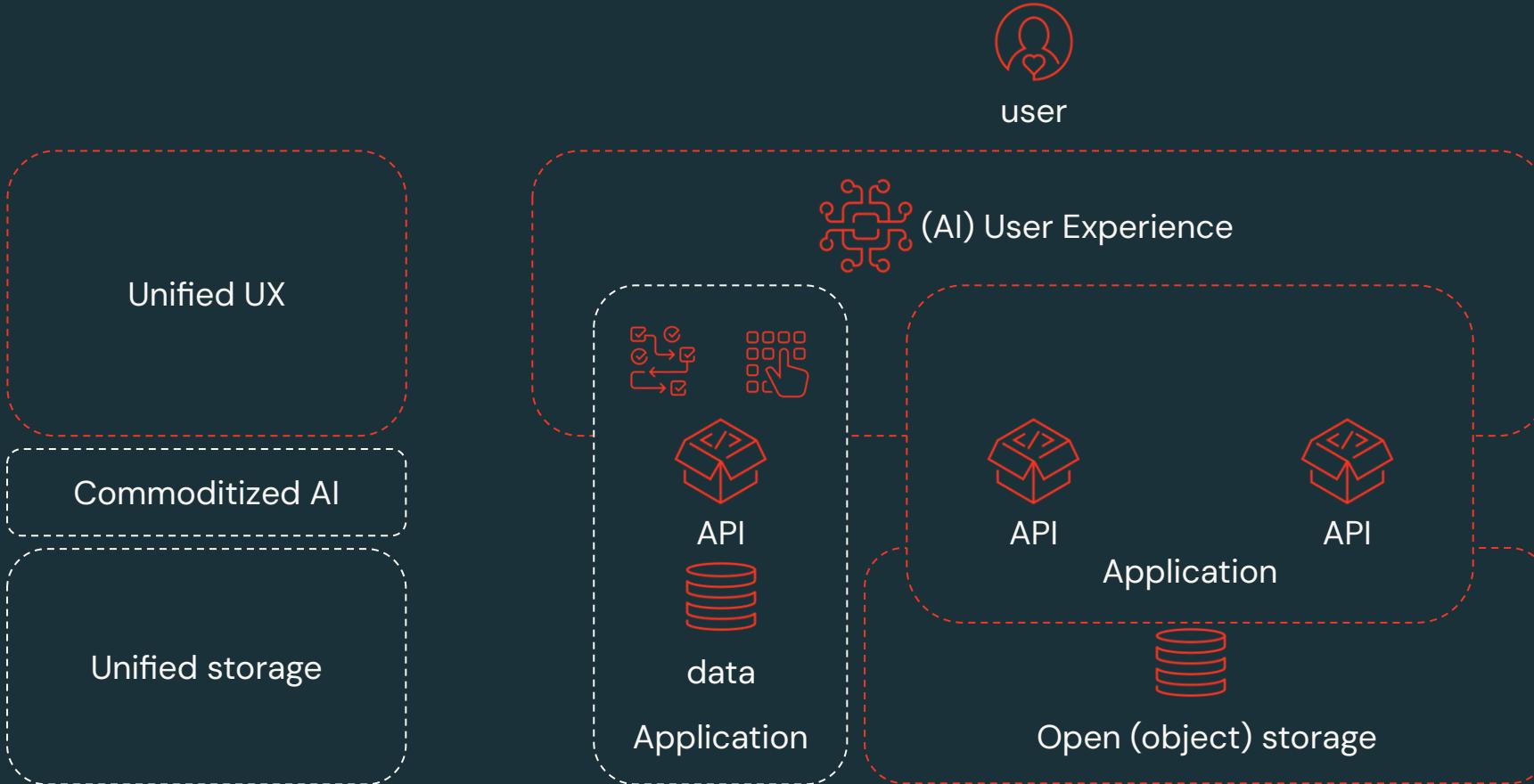
We are here!



# Theme 3: Headless Applications



# Theme 3: Headless Applications



yesterday  
today  
tomorrow

