-- Chart 2: Monthly active addresses and transactions by category

-- Complete dataset using actual daily active addresses from core transactions table - ALL MONTHS

WITH

-- Calculate actual daily active addresses from core transactions

overall\_daily AS (

SELECT

DATE\_TRUNC('day', block\_timestamp) as day\_,

COUNT(DISTINCT from\_address) as daily\_active\_addresses,

COUNT(\*) as daily\_transactions

FROM ETHEREUM.CORE.FACT\_TRANSACTIONS

WHERE block\_timestamp >= '2023-01-01'

AND block\_timestamp < '2025-09-01'

AND from\_address IS NOT NULL

AND tx\_succeeded = TRUE

GROUP BY DATE\_TRUNC('day', block\_timestamp)

),

-- Overall network metrics - monthly average of daily active addresses

overall\_metrics AS (

SELECT

DATE\_TRUNC('month', day\_) as month,

AVG(daily\_active\_addresses) as avg\_daily\_active\_addresses,

SUM(daily\_transactions) as total\_monthly\_transactions,

'TOTAL' as sector

FROM overall\_daily

GROUP BY DATE\_TRUNC('month', day\_)

),

-- DEX Trading - daily aggregation then monthly average

dex\_daily AS (

SELECT

DATE\_TRUNC('day', block\_timestamp) as day\_,

COUNT(DISTINCT origin\_from\_address) as daily\_active\_addresses,

COUNT(\*) as daily\_transactions

FROM ethereum.defi.ez\_dex\_swaps

WHERE block\_timestamp >= '2023-01-01'

AND block\_timestamp < '2025-09-01'

AND origin\_from\_address IS NOT NULL

GROUP BY DATE\_TRUNC('day', block\_timestamp)

),

dex\_metrics AS (

SELECT

DATE\_TRUNC('month', day\_) as month,

AVG(daily\_active\_addresses) as avg\_daily\_active\_addresses,

SUM(daily\_transactions) as transactions,

'DEX Trading' as sector

FROM dex\_daily

GROUP BY DATE\_TRUNC('month', day\_)

),

-- Lending Deposits - daily aggregation then monthly average

lending\_deposits\_daily AS (

SELECT

DATE\_TRUNC('day', block\_timestamp) as day\_,

COUNT(DISTINCT depositor) as daily\_active\_addresses,

COUNT(\*) as daily\_transactions

FROM ethereum.defi.ez\_lending\_deposits

WHERE block\_timestamp >= '2023-01-01'

AND block\_timestamp < '2025-09-01'

AND depositor IS NOT NULL

GROUP BY DATE\_TRUNC('day', block\_timestamp)

),

lending\_deposits\_metrics AS (

SELECT

DATE\_TRUNC('month', day\_) as month,

AVG(daily\_active\_addresses) as avg\_daily\_active\_addresses,

SUM(daily\_transactions) as transactions,

'Lending Deposits' as sector

FROM lending\_deposits\_daily

GROUP BY DATE\_TRUNC('month', day\_)

),

-- Lending Borrows - daily aggregation then monthly average

lending\_borrows\_daily AS (

SELECT

DATE\_TRUNC('day', block\_timestamp) as day\_,

COUNT(DISTINCT borrower) as daily\_active\_addresses,

COUNT(\*) as daily\_transactions

FROM ethereum.defi.ez\_lending\_borrows

WHERE block\_timestamp >= '2023-01-01'

AND block\_timestamp < '2025-09-01'

AND borrower IS NOT NULL

GROUP BY DATE\_TRUNC('day', block\_timestamp)

),

lending\_borrows\_metrics AS (

SELECT

DATE\_TRUNC('month', day\_) as month,

AVG(daily\_active\_addresses) as avg\_daily\_active\_addresses,

SUM(daily\_transactions) as transactions,

'Lending Borrows' as sector

FROM lending\_borrows\_daily

GROUP BY DATE\_TRUNC('month', day\_)

),

-- NFT Sales - daily aggregation then monthly average

nft\_sales\_daily AS (

SELECT

DATE\_TRUNC('day', block\_timestamp) as day\_,

COUNT(DISTINCT buyer\_address) + COUNT(DISTINCT seller\_address) as daily\_active\_addresses,

COUNT(\*) as daily\_transactions

FROM ethereum.nft.ez\_nft\_sales

WHERE block\_timestamp >= '2023-01-01'

AND block\_timestamp < '2025-09-01'

AND (buyer\_address IS NOT NULL OR seller\_address IS NOT NULL)

GROUP BY DATE\_TRUNC('day', block\_timestamp)

),

nft\_sales\_metrics AS (

SELECT

DATE\_TRUNC('month', day\_) as month,

AVG(daily\_active\_addresses) as avg\_daily\_active\_addresses,

SUM(daily\_transactions) as transactions,

'NFT Sales' as sector

FROM nft\_sales\_daily

GROUP BY DATE\_TRUNC('month', day\_)

),

-- NFT Transfers - daily aggregation then monthly average

nft\_transfers\_daily AS (

SELECT

DATE\_TRUNC('day', block\_timestamp) as day\_,

COUNT(DISTINCT from\_address) + COUNT(DISTINCT to\_address) as daily\_active\_addresses,

COUNT(\*) as daily\_transactions

FROM ethereum.nft.ez\_nft\_transfers

WHERE block\_timestamp >= '2023-01-01'

AND block\_timestamp < '2025-09-01'

AND from\_address != to\_address

AND from\_address IS NOT NULL

AND to\_address IS NOT NULL

GROUP BY DATE\_TRUNC('day', block\_timestamp)

),

nft\_transfers\_metrics AS (

SELECT

DATE\_TRUNC('month', day\_) as month,

AVG(daily\_active\_addresses) as avg\_daily\_active\_addresses,

SUM(daily\_transactions) as transactions,

'NFT Transfers' as sector

FROM nft\_transfers\_daily

GROUP BY DATE\_TRUNC('month', day\_)

),

-- Calculate sector sums for Others calculation

sector\_sums AS (

SELECT

month,

SUM(avg\_daily\_active\_addresses) as total\_avg\_daily\_addresses,

SUM(transactions) as total\_sector\_transactions

FROM (

SELECT month, avg\_daily\_active\_addresses, transactions FROM dex\_metrics

UNION ALL

SELECT month, avg\_daily\_active\_addresses, transactions FROM lending\_deposits\_metrics

UNION ALL

SELECT month, avg\_daily\_active\_addresses, transactions FROM lending\_borrows\_metrics

UNION ALL

SELECT month, avg\_daily\_active\_addresses, transactions FROM nft\_sales\_metrics

UNION ALL

SELECT month, avg\_daily\_active\_addresses, transactions FROM nft\_transfers\_metrics

)

GROUP BY month

),

-- Calculate Others category

others\_metrics AS (

SELECT

o.month,

GREATEST(0, o.avg\_daily\_active\_addresses - COALESCE(s.total\_avg\_daily\_addresses, 0)) as avg\_daily\_active\_addresses,

GREATEST(0, o.total\_monthly\_transactions - COALESCE(s.total\_sector\_transactions, 0)) as transactions,

'Others' as sector

FROM overall\_metrics o

LEFT JOIN sector\_sums s ON o.month = s.month

)

-- Union all results

SELECT

TO\_CHAR(month, 'YYYY-MM') as month,

sector,

ROUND(avg\_daily\_active\_addresses, 0) as avg\_daily\_active\_addresses,

transactions

FROM (

SELECT month, sector, avg\_daily\_active\_addresses, total\_monthly\_transactions as transactions FROM overall\_metrics

UNION ALL

SELECT month, sector, avg\_daily\_active\_addresses, transactions FROM dex\_metrics

UNION ALL

SELECT month, sector, avg\_daily\_active\_addresses, transactions FROM lending\_deposits\_metrics

UNION ALL

SELECT month, sector, avg\_daily\_active\_addresses, transactions FROM lending\_borrows\_metrics

UNION ALL

SELECT month, sector, avg\_daily\_active\_addresses, transactions FROM nft\_sales\_metrics

UNION ALL

SELECT month, sector, avg\_daily\_active\_addresses, transactions FROM nft\_transfers\_metrics

UNION ALL

SELECT month, sector, avg\_daily\_active\_addresses, transactions FROM others\_metrics

) all\_data

ORDER BY month,

CASE

WHEN sector = 'TOTAL' THEN 1

WHEN sector = 'DEX Trading' THEN 2

WHEN sector = 'Lending Deposits' THEN 3

WHEN sector = 'Lending Borrows' THEN 4

WHEN sector = 'NFT Sales' THEN 5

WHEN sector = 'NFT Transfers' THEN 6

WHEN sector = 'Others' THEN 7

END