

XyloNet - Complete Project Documentation & Future Vision

Comprehensive documentation covering current implementation, deployed infrastructure, and proposed enhancements for Arc Builders Fund alignment

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PART A: CURRENT IMPLEMENTATION

Executive Summary

XyloNet is a comprehensive DeFi protocol built exclusively for Arc Network, combining three core primitives into a unified stablecoin SuperExchange:

Component	Description	Status
XyloSwap	StableSwap AMM for stablecoin trading	✔ Live
XyloBridge	Circle CCTP V2 cross-chain bridge	✔ Live
XyloVault	ERC-4626 yield aggregation vault	✔ Live

Key Metrics

- **Network:** Arc Testnet (Chain ID: 5042002)
- **Contracts Deployed:** 6 verified contracts

- **Supported Tokens:** USDC, EURC, USYC
- **Bridge Chains:** 7 networks (Ethereum, Arbitrum, Base, Optimism, Polygon, Avalanche, Arc)
- **Transaction Cost:** ~\$0.01 per operation
- **Finality:** <350ms deterministic
- **Live URL:** <https://xylonet.xyz>

Project Vision & Mission

Vision

To become the premier stablecoin exchange infrastructure on Arc Network, enabling seamless trading, bridging, and yield generation for the internet economy.

Mission

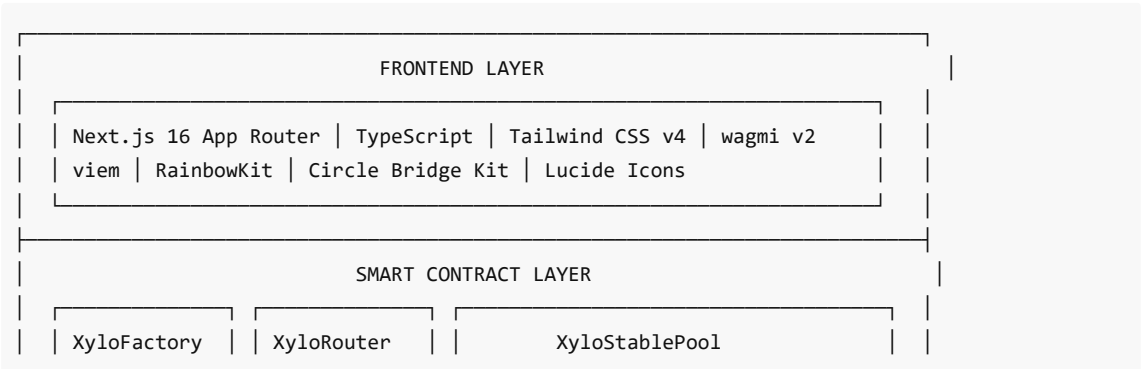
1. **Democratize Stablecoin Access:** Enable anyone to swap, bridge, and earn yield on stablecoins with minimal friction
2. **Maximize Capital Efficiency:** Use StableSwap curves for minimal slippage on large trades
3. **Enable Global Payments:** Leverage CCTP V2 for instant cross-border USDC transfers
4. **Generate Sustainable Yield:** Provide safe, auto-compounding yield strategies

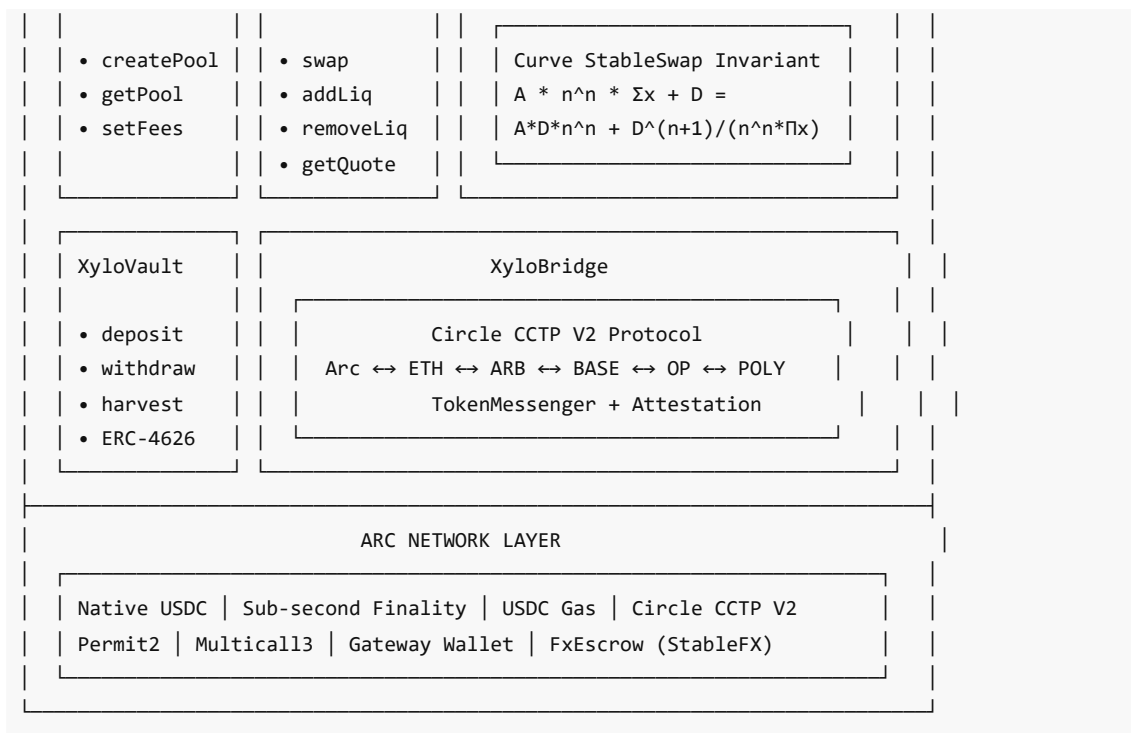
Core Value Propositions

Value	How XyloNet Delivers
Instant Settlement	<350ms deterministic finality on Arc Network
Predictable Costs	~\$0.01 per transaction, denominated in USDC (not volatile ETH)
Native Cross-Chain	Circle CCTP V2 - no wrapped tokens, native USDC everywhere
Real Yield	USYC integration for Treasury-backed yields
Enterprise Ready	Compliance-friendly with opt-in privacy features
Mobile First	Fully responsive UI for mobile traders
Immersive UX	Revolutionary animations, 3D effects, and glassmorphism

Technical Architecture

System Overview





Directory Structure

```

XyloNet/
├── contracts/                                # Solidity smart contracts
│   ├── src/
│   │   ├── core/                            # Core DEX infrastructure
│   │   │   ├── XyloFactory.sol              # Pool deployment factory
│   │   │   ├── XyloRouter.sol               # Swap routing & execution
│   │   │   ├── XyloStablePool.sol           # StableSwap AMM
│   │   │   └── XyloERC20.sol                 # LP token standard
│   │   ├── bridge/
│   │   │   └── XyloBridge.sol                # CCTP V2 bridge wrapper
│   │   ├── vault/
│   │   │   └── XyloVault.sol                 # ERC-4626 yield vault
│   │   └── interfaces/                       # Contract interfaces
│   ├── scripts/
│   │   ├── deploy.js                        # Deployment automation
│   │   └── add-liquidity.js                  # Liquidity bootstrap
│   ├── hardhat.config.js
│   └── package.json
├── frontend/                                # Next.js application
│   ├── src/
│   │   ├── app/                             # App Router pages
│   │   │   ├── page.tsx                     # Home / Swap interface
│   │   │   ├── bridge/                      # Bridge interface
│   │   │   ├── pools/                       # Liquidity pools
│   │   │   ├── vault/                       # Yield vault
│   │   │   └── history/                     # Transaction history

```

```
| | | | └─ layout.tsx          # Root layout
| | | |   └─ globals.css      # Global styles + mobile CSS
| | | └─ components/
| | | | └─ swap/SwapWidget.tsx
| | | | └─ bridge/BridgeWidget.tsx
| | | | └─ ui/                # Reusable UI components
| | | |   └─ Toast.tsx
| | | |   └─ TokenLogos.tsx
| | | |   └─ Skeleton.tsx
| | | |   └─ Tooltip.tsx
| | | |   └─ Confetti.tsx
| | | |   └─ EmptyState.tsx
| | | |   └─ AnimatedBackground.tsx
| | | |   └─ TiltCard.tsx
| | | |   └─ AnimatedElements.tsx
| | | |   └─ CommandPalette.tsx
| | | | └─ Header.tsx
| | | | └─ Footer.tsx
| | | |   └─ Providers.tsx
| | | └─ config/
| | | | └─ wagmi.ts
| | | | └─ constants.ts
| | | |   └─ abis/
| | | └─ lib/
| | | | └─ utils.ts
| | | |   └─ transactions.ts
| | └─ package.json
|
└─ XYLONET_PROJECT.md
└─ IMPLEMENTATION_PLAN.md
└─ README.md
└─ SECURITY.md
└─ CONTRIBUTING.md
```

Smart Contracts Deep Dive

1. XyloFactory

Purpose: Manages pool deployment and protocol configuration.

Address: 0x60EDeFB094B84BBC6430cc130B358A43Ba1979e2

Key Functions:

Function	Parameters	Description
createPool	tokenA, tokenB, A	Deploy new StableSwap pool
getPool	tokenA, tokenB	Get pool address
setSwapFee	fee	Update global swap fee (owner)
setFeeRecipient	recipient	Set protocol fee recipient

setPaused	status	Emergency pause (owner)
-----------	--------	-------------------------

Protocol Parameters:

Parameter	Value	Description
Swap Fee	0.04% (4 bps)	Fee charged on each swap
Protocol Fee	50%	Portion of swap fee to protocol
Default A	200	Amplification parameter

2. XyloRouter

Purpose: User-friendly interface for swaps and liquidity operations.

Address: 0x73742278c31a76dBb0D2587d03ef92E6E2141023

Swap Interface:

```
struct SwapParams {
    address tokenIn;
    address tokenOut;
    uint256 amountIn;
    uint256 minAmountOut;
    address to;
    uint256 deadline;
}

function swap(SwapParams calldata params) external returns (uint256 amountOut);
```

Liquidity Interface:

```
function addLiquidity(AddLiquidityParams calldata params) external returns (uint256 lpTokens);
function removeLiquidity(RemoveLiquidityParams calldata params) external returns (uint256, uint256);
```

Quote Functions:

```
function getAmountOut(address tokenIn, address tokenOut, uint256 amountIn)
    external view returns (uint256);
```

3. XyloStablePool

Purpose: Implements Curve's StableSwap invariant for minimal slippage.

Deployed Pools:

Pool	Address	Tokens
------	---------	--------

USDC-EURC	0x3DF3966F5138143dce7a9cFDdC2c0310ce083BB1	USDC ↔ EURC
USDC-USYC	0x8296cC7477A9CD12cF632042fDDc2aB89151bb61	USDC ↔ USYC

StableSwap Curve Formula:

$$A * n^n * \sum x_i + D = A * D * n^n + D^{(n+1)} / (n^n * \prod x_i)$$

Where:

- **A** = Amplification parameter (200) - controls curve tightness
- **n** = Number of tokens (2)
- **D** = Total liquidity invariant
- **x_i** = Reserve of token i

Why StableSwap?

- Near-zero slippage for stablecoin pairs at normal volumes
- 10-100x better rates than constant product AMM for pegged assets
- Ideal for USDC ↔ EURC (both pegged to fiat)

4. XyloBridge

Purpose: Cross-chain USDC transfers via Circle's CCTP V2.

Address: 0xf7Df65Ce418E938ee8d9a0A0d227A43441fe4641

CCTP V2 Integration:

```
function bridgeToChain(
    uint256 amount,
    string calldata chainName,
    address recipient
) external returns (bytes32 nonce);
```

Supported Chains (CCTP Domain IDs):

Chain	Domain ID	Network	Status
Ethereum	0	Sepolia	✔ Active
Avalanche	1	Fuji	✔ Active
Optimism	2	Sepolia	✔ Active
Arbitrum	3	Sepolia	✔ Active
Base	6	Sepolia	✔ Active
Polygon	7	Amoy	✔ Active
Arc Network	26	Testnet	✔ Active

Bridge Flow:

- 1. User initiates bridge → Approve USDC
- 2. XyloBridge calls `depositForBurn` on TokenMessengerV2
- 3. Circle attests the burn
- 4. Bridge Kit automatically mints on destination chain
- 5. User receives native USDC (~30 seconds for fast mode)

5. XyloVault

Purpose: ERC-4626 compliant yield vault for USDC deposits.

Address: `0x240Eb85458CD41361bd8C3773253a1D78054f747`

ERC-4626 Interface:

```
// Deposit assets, receive shares
function deposit(uint256 assets, address receiver) external returns (uint256 shares);

// Withdraw assets by burning shares
function withdraw(uint256 assets, address receiver, address owner) external returns (uint256 shares);

// Preview functions
function previewDeposit(uint256 assets) external view returns (uint256);
function previewWithdraw(uint256 shares) external view returns (uint256);
```

Fee Structure:

Fee Type	Rate	Description
Deposit Fee	0%	No entry fee
Withdraw Fee	0.1%	Small exit fee
Performance Fee	10%	On profit only

Frontend Application

Technology Stack

Technology	Version	Purpose
Next.js	16	React framework with App Router
TypeScript	5.x	Type safety
Tailwind CSS	4.x	Utility-first styling
wagmi	2.x	React Hooks for Ethereum
viem	2.x	TypeScript Ethereum client
RainbowKit	2.x	Wallet connection

Circle Bridge Kit	Latest	Cross-chain UI
Lucide React	Latest	Icon library
Vercel Analytics	Latest	Performance monitoring

Pages

Route	Description	Features
/	Swap	Token swap with slippage control, price impact display
/bridge	Bridge	Cross-chain USDC transfer with chain selector
/pools	Pools	Liquidity management, TVL, APY display
/vault	Vault	USDC yield vault with APY tracking
/history	History	Transaction history with filtering

Revolutionary UI/UX Components

Component	Description
AnimatedBackground	Canvas particle system with 120+ particles, aurora effect, mouse interaction
TiltCard	3D perspective cards with customizable tilt (0-20°), dynamic glare
AnimatedElements	Magnetic buttons, counting animations, floating elements
CommandPalette	Keyboard navigation (Ctrl+K) with fuzzy search
Toast	Transaction notifications with status
Confetti	Success celebration effects

Mobile Responsiveness

- **Touch-friendly targets:** Minimum 44-48px height
- **Bottom sheet modals:** Slide-up modals on mobile
- **Safe area insets:** Support for notched devices
- **Active state feedback:** Visual feedback on touch
- **Responsive typography:** Scaled text sizes
- **Horizontal scroll:** Filter pills with scroll

Feature Breakdown

1. XyloSwap (Token Exchange)

User Journey:

1. Connect wallet → Select input token (USDC/EURC/USYC)
2. Enter amount → See real-time quote
3. Adjust slippage tolerance (0.1%, 0.5%, 1.0%)
4. Click "Swap" → Approve token (if needed) → Execute swap

5. See confetti celebration on success

Features:

- Real-time price quotes via Router contract
 - USD value display for amounts
 - MAX button for full balance swaps
 - Price impact indicator (green/yellow/red)
 - Network fee display
 - Slippage tolerance settings
 - Token switcher with flip animation
-

2. XyloBridge (Cross-Chain)

User Journey:

1. Connect wallet → Select destination chain
2. Enter USDC amount → See estimated output
3. Click "Bridge" → Approve USDC → Execute bridge
4. Wait for Circle attestation (~30 seconds)
5. USDC automatically arrives on destination chain

Features:

- Chain selector with official logos
 - Fast transfer mode (~30 seconds)
 - Step-by-step progress indicator
 - Real-time status updates
 - Auto-delivery via Bridge Kit
 - Estimated fees and time display
-

3. XyloPools (Liquidity Provision)

User Journey:

1. View available pools → See TVL, APY, your position
2. Click "Add" → Enter token amounts
3. Approve tokens (if needed) → Add liquidity
4. Receive LP tokens representing pool share
5. Earn 0.04% of all trades

Features:

- Pool analytics (TVL, 24h volume, fees)
 - Your LP position and share percentage
 - Add/remove liquidity modals
 - Real-time reserve data
-

4. XyloVault (Yield Generation)

User Journey:

1. View vault stats → See TVL, APY, your position
2. Click "Deposit" → Enter USDC amount
3. Approve USDC → Execute deposit

- 4. Receive xyUSDC vault shares
- 5. Earn auto-compounding yield

Features:

- Real-time APY display (calculated dynamically)
- Your position value in USDC
- Deposit/withdraw modals
- Strategy description

Deployed Infrastructure

XyloNet Contracts

Contract	Address	Explorer Link
XyloFactory	0x60EDeFB094B84BBC6430cc130B358A43Ba1979e2	View
XyloRouter	0x73742278c31a76dBb0D2587d03ef92E6E2141023	View
XyloBridge	0xf7Df65Ce418E938ee8d9a0A0d227A43441fe4641	View
XyloVault	0x240Eb85458CD41361bd8C3773253a1D78054f747	View
USDC-EURC Pool	0x3DF3966F5138143dce7a9cFDdC2c0310ce083BB1	View
USDC-USYC Pool	0x8296cC7477A9CD12cF632042fDDc2aB89151bb61	View

Arc Network Native Contracts

Contract	Address	Purpose
USDC (Native)	0x3600	Native stablecoin
EURC	0x89B50855Aa3bE2F677cD6303Cec089B5F319D72a	Euro stablecoin
USYC	0xe9185F0c5F296Ed1797AaE4238D26CCaBEadb86C	Yield-bearing stablecoin
TokenMessengerV2	0x8FE6B999Dc680CcFDD5Bf7EB0974218be2542DAA	CCTP V2 messenger
MessageTransmitterV2	0xE737e5cEBEEBa77EFE34D4aa090756590b1CE275	CCTP V2 transmitter
Gateway Wallet	0x0077777d7EBA4688BDeF3E311b846F25870A19B9	Fiat on/off ramp
FxEscrow	0x1f91886C7028986aD885ffCee0e40b75C9cd5aC1	StableFX escrow
Permit2	0x000000000022D473030F116dDEE9F6B43aC78BA3	Gasless approvals
Multicall3	0xcA11bde05977b3631167028862bE2a173976CA11	Batch calls

Network Configuration

Parameter	Value
Network Name	Arc Testnet

Chain ID	5042002
RPC URL	https://rpc.testnet.arc.network
WebSocket	wss://rpc.testnet.arc.network
Block Explorer	https://testnet.arcscan.app
Currency	USDC
Block Time	<350ms

Integration Guide

Quick Start

```
# Clone repository
git clone https://github.com/Panchu11/XyloNet.git
cd XyloNet

# Install frontend dependencies
cd frontend
npm install

# Start development server
npm run dev
```

Contract Integration (JavaScript/TypeScript)

```
import { createPublicClient, http } from 'viem';
import { CONTRACTS, ARC_NETWORK } from './config/constants';
import { XYLO_ROUTER_ABI } from './config/abis';

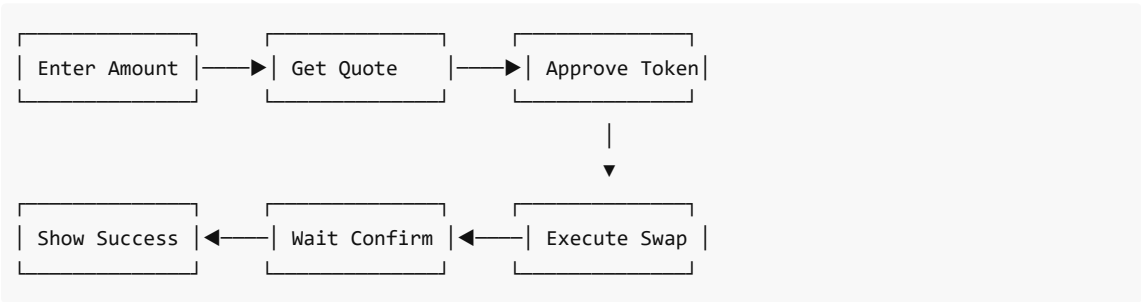
// Create client
const client = createPublicClient({
  chain: {
    id: 5042002,
    name: 'Arc Testnet',
    rpcUrls: { default: { http: ['https://rpc.testnet.arc.network'] } },
  },
  transport: http(),
});

// Get swap quote
const quote = await client.readContract({
  address: CONTRACTS.ROUTER,
  abi: XYLO_ROUTER_ABI,
  functionName: 'getAmountOut',
  args: [CONTRACTS.USDC, CONTRACTS.EURC, parseUnits('100', 6)]
});
```

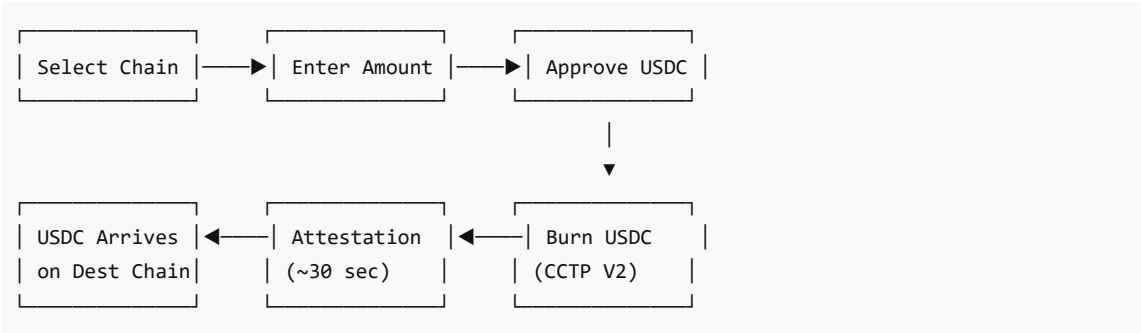
```
// Execute swap
const hash = await walletClient.writeContract({
  address: CONTRACTS.ROUTER,
  abi: XYLO_ROUTER_ABI,
  functionName: 'swap',
  args: [{
    tokenIn: CONTRACTS.USDC,
    tokenOut: CONTRACTS.EURC,
    amountIn: parseUnits('100', 6),
    minAmountOut: quote * 99n / 100n,
    to: userAddress,
    deadline: BigInt(Math.floor(Date.now() / 1000) + 3600)
  }]
});
```

User Flows

Swap Flow



Bridge Flow



Security Model

Smart Contract Security

Safeguard	Implementation
Reentrancy Protection	lock modifier on all state-changing functions

CEI Pattern	Checks-Effects-Interactions ordering
Access Control	Owner-only for sensitive operations
Deadline Validation	All trades require valid deadline
Minimum Output	All swaps enforce minAmountOut
Zero Address Checks	Validate all address parameters
Safe Math	Solidity 0.8+ built-in overflow checks
Decimal Handling	Proper scaling for 6/18 decimal tokens

Audit Status

- Internal review completed
- External audit planned for mainnet launch

PART B: FUTURE VISION & ENHANCEMENTS

Arc Network Deep Analysis

What Makes Arc Unique

Arc Network is Circle's purpose-built Layer 1 blockchain designed specifically for stablecoin finance. Unlike general-purpose blockchains, Arc is engineered from the ground up for enterprise-grade stablecoin applications.

Core Technical Features

Feature	Description	Benefit
USDC Native Gas	Pay transaction fees in USDC, not volatile crypto	Predictable costs for businesses
Malachite Consensus	BFT consensus with sub-second finality	<350ms deterministic settlement
Opt-in Privacy	Trusted Execution Environments (TEEs) for shielded transactions	Compliance-friendly confidentiality
3,000+ TPS	High throughput with potential for 10,000+ TPS	Enterprise scalability
EVM Compatible	Full Ethereum JSON-RPC support	Easy developer adoption

Circle Ecosystem Integration

Circle Payments Network (CPN)

- Global money movement infrastructure
- Real-time cross-border payments
- Operational rules for compliance
- Partner network for liquidity

Circle StableFX

- Institutional-grade FX engine
- Request for Quote (RFQ) execution
- 24/7 trading of stablecoin pairs (USDC ↔ EURC)
- Payment-versus-Payment (PvP) settlement
- No prefunding required

Circle Gateway

- Chain-abstracted USDC balances
- Deposit USDC on any chain
- Instant access on destination chains
- Eliminates manual bridging

Gap Analysis: What We're Missing

Current vs. Potential Arc Feature Utilization

Arc Network Feature	Current Use	Potential
USDC Native Gas	✔ Full	Already optimized
Sub-second Finality	✔ Full	Already leveraged
CCTP V2 Bridge	✔ Full	Working implementation
USDC Token	✔ Full	Core asset
EURC Token	✔ Full	Used in pools
USYC Token	⚠ Partial	Needs yield strategies
Permit2	⚠ Partial	Need gasless approvals
Multicall3	⚠ Partial	Could batch more calls
FxEscrow (StableFX)	✖ None	RFQ for large trades
Gateway Wallet	✖ None	Chain abstraction
Account Abstraction	✖ None	Gasless transactions

Proposed Enhancements

Enhancement 1: StableFX RFQ Integration

Priority: CRITICAL | Arc Builders Fund Vertical: FX

Circle StableFX is an institutional-grade FX engine that provides Request for Quote (RFQ) execution with Payment-versus-Payment (PvP) settlement on Arc.

Why It Matters:

- Large trades (> \$10,000) get better rates via RFQ than AMM
- Institutional users expect RFQ functionality

- Direct alignment with Arc Builders Fund "FX" vertical
- First-mover advantage on Arc

Technical Flow:

1. User requests quote from StableFX API
2. Quote returned with rate and expiry
3. User signs EIP-712 trade intent
4. User signs Permit2 funding authorization
5. Trade settled atomically via FxEscrow

Enhancement 2: Account Abstraction (Gasless Transactions)

Priority: HIGH | Arc Builders Fund Vertical: Enterprise Ready

ERC-4337 smart contract wallets that enable gasless transactions, session keys, and advanced wallet features.

Why It Matters:

- Users don't need to hold USDC for gas
- Reduces onboarding friction
- Enables automated transactions
- Better UX than traditional EOA wallets

Supported Providers on Arc:

Provider	Purpose
Pimlico	Bundler + Paymaster infrastructure
ZeroDev	Smart account SDK

Features Enabled:

- Sponsored Transactions: XyloNet pays gas for users
- Session Keys: Automated trading without repeated approvals
- Social Login: Connect with Google, Apple, etc.
- Batch Transactions: Approve + Swap in one click

Enhancement 3: Permit2 Gasless Approvals

Priority: HIGH | Arc Builders Fund Vertical: Enterprise Ready

A universal approval mechanism that allows signature-based token approvals instead of on-chain approve() calls.

Why It Matters:

- One-time approval to Permit2 contract
- All future transfers use off-chain signatures
- Reduces gas costs
- Better UX - "Sign once, swap forever"

Enhancement 4: Prediction Markets

Priority: HIGH | Arc Builders Fund Vertical: Capital Formation

The Arc Builders Fund explicitly calls out "prediction markets" as a target vertical under "Always-on Markets & Capital Formation."

Market Types:

Market Type	Description	Example
Binary	Yes/No outcomes	"Will BTC hit \$100K by Q1 2026?"
Scalar	Range of values	"What will EURC/USDC rate be on Jan 1?"
Categorical	Multiple outcomes	"Which chain will have highest TVL?"

Features:

- Market browser with categories
- Trading interface (buy YES/NO shares)
- USDC-settled
- Oracle integration (Pyth/Chainlink)

Enhancement 5: AI Agent Interface (MCP Tools)

Priority: HIGH | Arc Builders Fund Vertical: Agentic Commerce

The Arc Builders Fund specifically targets "Agentic Commerce" as a priority vertical.

MCP Tool Definition:

```
{
  "name": "xylonet",
  "tools": [
    {
      "name": "xylonet_get_swap_quote",
      "description": "Get a quote for swapping between stablecoins",
      "parameters": {
        "tokenIn": "USDC|EURC|USYC",
        "tokenOut": "USDC|EURC|USYC",
        "amountIn": "number"
      }
    },
    {
      "name": "xylonet_execute_swap",
      "description": "Execute a stablecoin swap"
    },
    {
      "name": "xylonet_bridge_usdc",
      "description": "Bridge USDC to another chain"
    },
    {
      "name": "xylonet_deposit_vault",
      "description": "Deposit USDC into vault for yield"
    }
  ]
}
```



```
]
}
```

Automated Strategies:

- DCA (Dollar Cost Averaging)
- Rebalancing
- Yield Optimization
- Arbitrage Detection

Enhancement 6: Limit Orders & Advanced Trading

Priority: MEDIUM | Arc Builders Fund Vertical: Markets

Order Types:

Order Type	Description
Limit	Execute at specific price
TWAP	Time-weighted average price
Stop-Loss	Execute when price falls
Take-Profit	Execute when price rises

Enhancement 7: Gateway Integration

Priority: MEDIUM | Arc Builders Fund Vertical: Cross-Chain

Circle Gateway provides chain-abstracted USDC balances.

Why It Matters:

- No manual bridging needed
- Unified balance across all chains
- Instant access to liquidity
- Better capital efficiency

Enhancement 8: USYC Yield Strategies

Priority: MEDIUM | Arc Builders Fund Vertical: Credit Markets

USYC is a yield-bearing token representing shares in a tokenized money market fund backed by short-duration U.S. Treasury securities.

Proposed Strategies:

- Auto-Compound USYC Yield
- Yield-Bearing LP (USDC-USYC)
- Dynamic Allocation based on rates

Arc Builders Fund Alignment

Priority Verticals (From Official Arc Builders Fund Blog)

1. Always-on Markets & Capital Formation

"From perpetuals DEXs and AMMs, to CLOBs, private pools, and prediction markets"

Our Implementation	Status
StableSwap AMM	✔ Live
Prediction Markets	🔄 Proposed
Limit Orders	🔄 Proposed

Alignment Score: 9/10 (with enhancements)

2. Offchain Assets & Credit Markets

"Bringing RWAs and credit markets onchain"

Our Implementation	Status
USYC Integration	✔ Live
USYC Yield Strategies	🔄 Proposed

Alignment Score: 8/10 (with enhancements)

3. FX (Foreign Exchange)

"Leverage Circle StableFX to grow onchain FX on Arc"

Our Implementation	Status
USDC ↔ EURC swaps	✔ Live
StableFX RFQ	🔄 Proposed

Alignment Score: 9/10 (with enhancements)

4. Agentic Commerce

"AI agents, autonomous infrastructure, machines governing machines"

Our Implementation	Status
MCP Tool Definitions	🔄 Proposed
REST API for agents	🔄 Proposed

Alignment Score: 8/10 (with enhancements)

Overall Grant Scoring

Vertical	Current	With Enhancements
----------	---------	-------------------

Markets & Capital Formation	6/10	9/10
Credit/RWA	4/10	8/10
FX	5/10	9/10
Agentic Commerce	0/10	8/10
Overall	3.75/10	8.5/10

Future Roadmap

Phase 6: Core Arc Integrations (Proposed)

Feature	Description	Timeline
StableFX RFQ	Integration with FxEscrow for large trades	2 weeks
Account Abstraction	Gasless transactions via Pimlico/ZeroDev	2 weeks
Permit2	Signature-based approvals	1 week
Gateway Integration	Chain-abstracted balances	1 week

Phase 7: Capital Formation Features (Proposed)

Feature	Description	Timeline
Prediction Markets	Binary outcome markets	3 weeks
AI Agent Tools	MCP definitions + API	1 week
Limit Orders	TWAP, stop-loss, take-profit	2 weeks

Phase 8: Advanced Optimizations (Proposed)

Feature	Description	Timeline
USYC Strategies	Auto-compound yield vault	2 weeks
Multi-hop Routing	EURC → USDC → USYC paths	1 week
Analytics Dashboard	Real-time protocol stats	2 weeks

Phase 9: Governance & Token (Proposed)

Feature	Description	Timeline
XYLO Token	Protocol governance token	2 weeks
Staking	Lock XYLO for fee sharing	2 weeks
DAO Governance	On-chain proposal system	2 weeks

Technical Specifications

Gas Estimates (Current)

Operation	Gas Units	Cost (USDC)
Swap	~120,000	~\$0.0012
Add Liquidity	~180,000	~\$0.0018
Remove Liquidity	~150,000	~\$0.0015
Bridge Out	~100,000	~\$0.0010
Vault Deposit	~80,000	~\$0.0008
Vault Withdraw	~90,000	~\$0.0009
Token Approval	~45,000	~\$0.00045

Performance Metrics

Metric	Value
Block Time	<350ms
Transaction Finality	Deterministic
RPC Response Time	<100ms
Frontend Load Time	<2s
Mobile Compatibility	100%

Browser Support

Browser	Version	Status
Chrome	90+	✔ Supported
Firefox	90+	✔ Supported
Safari	14+	✔ Supported
Edge	90+	✔ Supported
Mobile Safari	iOS 14+	✔ Supported
Mobile Chrome	Android 10+	✔ Supported

Competitive Differentiation

What Makes Enhanced XyloNet Unique

Differentiator	Description
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All-in-One Hub	Swap + Bridge + Vault + FX + Prediction + Orders
Arc-Native	Purpose-built, not a fork
StableFX First	First DeFi protocol with RFQ integration
AI-Ready	MCP tools for agentic commerce
Gasless UX	Account abstraction for frictionless trading
Enterprise Grade	Institutional features (RFQ, large trade optimization)

Resources

Resource	Link
GitHub Repository	https://github.com/Panchu11/XyloNet
Live Application	https://xylonet.xyz
Arc Network Docs	https://docs.arc.network
Arc Testnet Explorer	https://testnet.arcsan.app
Circle Faucet	https://faucet.circle.com
Circle CCTP Docs	https://developers.circle.com/stablecoins/cctp-getting-started
Arc Builders Fund	https://www.circle.com/blog/introducing-the-arc-builders-fund
X (Twitter)	https://x.com/XyloNet

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XyloNet - The Stablecoin SuperExchange for Arc Network

Built with ❤️ by ForgeLabs for the Arc Network ecosystem

Prepared for Arc Builders Fund Application