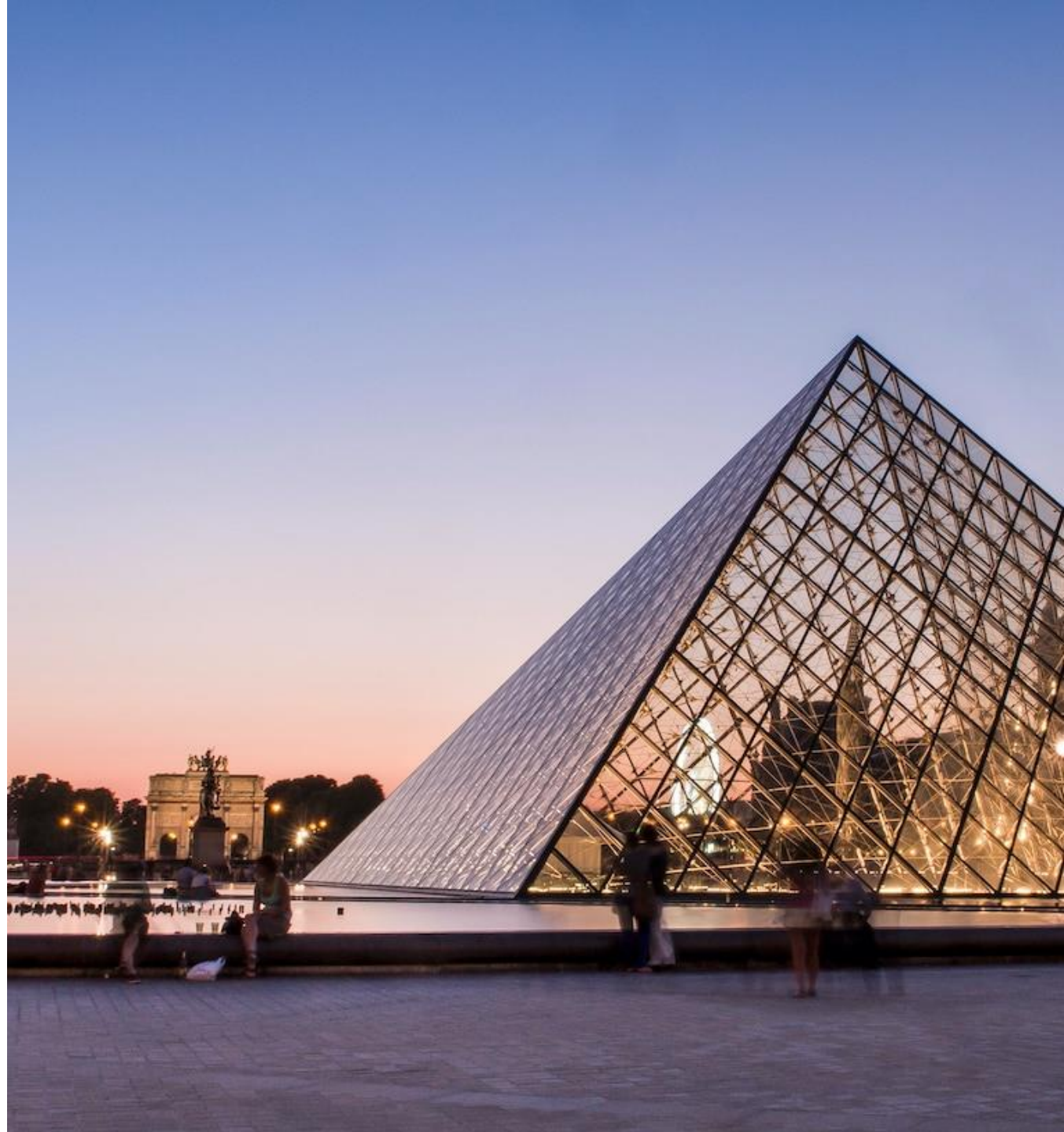


Physical Asset Tokenisation



opus.

EACH TOKEN A MASTERPIECE





Oliver Keller

Master Student
MLaw
University of Basel



Dominique Ostermayer

Bachelor Student
BSc Mathematics
University of Basel



Dario Thürkauf

Bachelor Student
BA Business & Economics
University of Basel

BearingPoint®

Problem

2

3

4

5

6

Investing in real-world art is cumbersome.



High minimum investment



Complex



Long processing times



High transaction costs

Problem

2

3

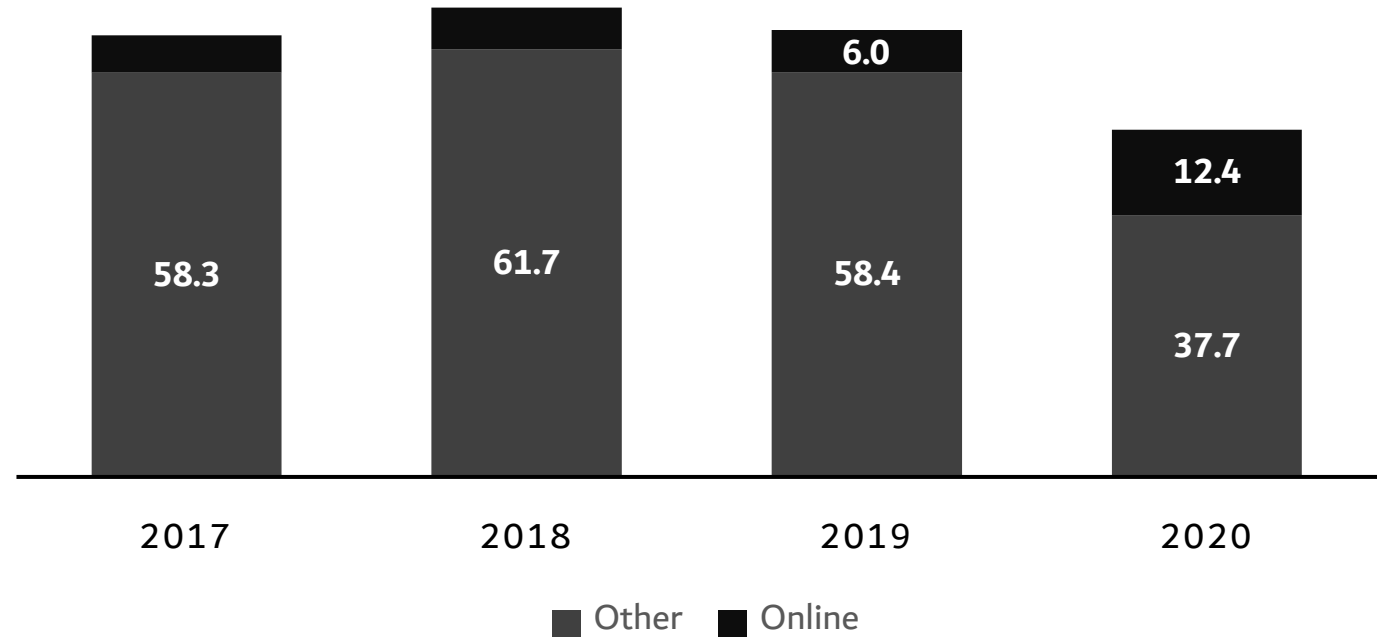
4

5

6

Total Sales Art & Antiques (Billion USD)

“One of the key challenges consistently identified by dealers over recent years has been finding new buyers.”



1

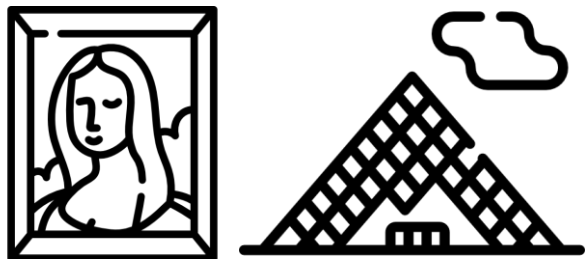
Process

3

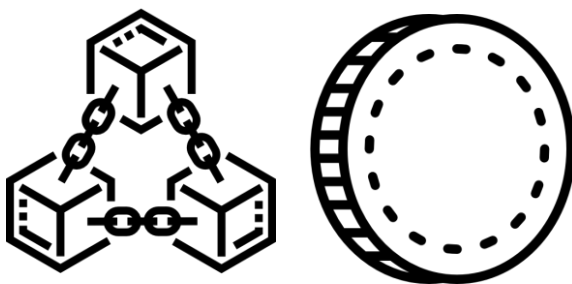
4

5

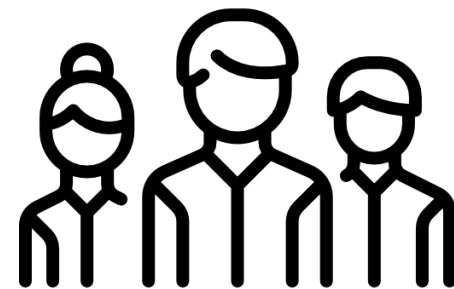
6



Artwork & Museum



Blockchain & Token Standard



Investors

Authentication
Custody

Tokenisation
Fractionalisation

Primary Issuance
Secondary Market

1

2

Solution

4

5

6

Physical World



Originator



Custody



Museum

Term Auction

Obligation

Authentication

Blockchain

Transactions

Governance

Information Management

1

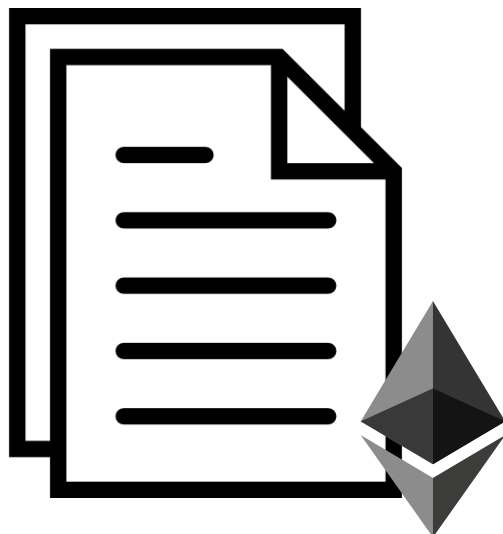
2

Solution

4

5

6



ERC1155 Token Standard

Key Properties

Supports multiple token types:
Fungible, non-fungible and semi-fungible

Each token ID can represent a new configurable token type, which may have its **own supply, meta data** and other attributes.

Tokenisation
Fractionalisation



1

2

Solution

4

5

6

ERC1155

Base**Token Receiver****Metadata**

(Information Management)

Example: Minting

```
contract ArtWorks is ERC1155 {  
    uint256 public constant MARYLIN = 0;  
    uint256 public constant DERSCHREI = 1;  
    uint256 public constant FELDHASE = 2;  
  
    constructor() public ERC1155("https://art.example/api/item/{id}.json") {  
        _mint(msg.sender, MARYLIN, 10**12, "");  
        _mint(msg.sender, DERSCHREI, 10**9, "");  
        _mint(msg.sender, FELDHASE, 10**15, "");  
    }  
}
```

Tokenisation
Fractionalisation



1

2

Solution

4

5

6



```
{
  "name": "Marilyn Monroe",
  "description": «oil on canvas»,
  "image": "https://www.moma.org/collection/works/61240",
  "properties": {
    "custodian": {
      "name": "Museum of Modern Art",
      "location": "40.7616°N 73.9776°W",
      "address": "11 West 53rd Street, Manhattan, New York",
      "country": "United States of America",
    }
    "provenance": {
      "event": "creation",
      "date": "1967",
      "party": "Andy Warhol",
      "notes": "",
    }
  }
}
```

Tokenisation
Fractionalisation

1

2

Solution

4

5

6

What is the value of the token without ability to purchase the underlying artwork?

Primary Issuance
Secondary Market



1

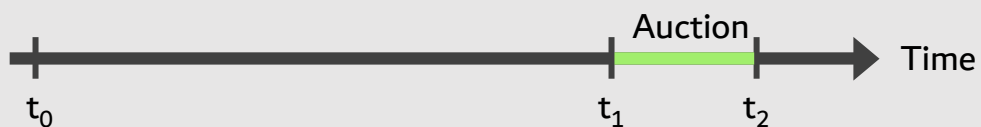
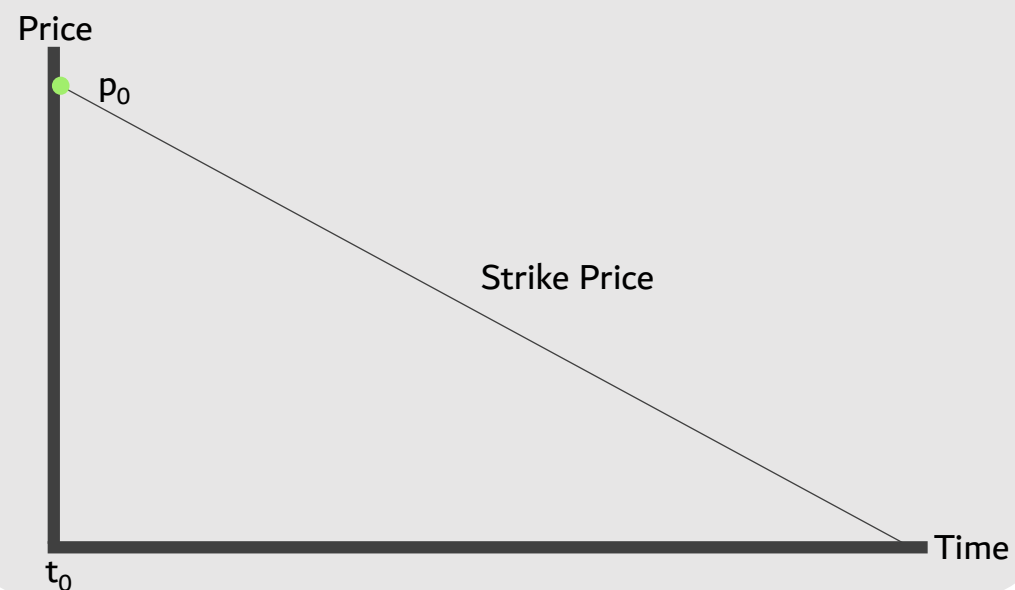
2

Solution

4

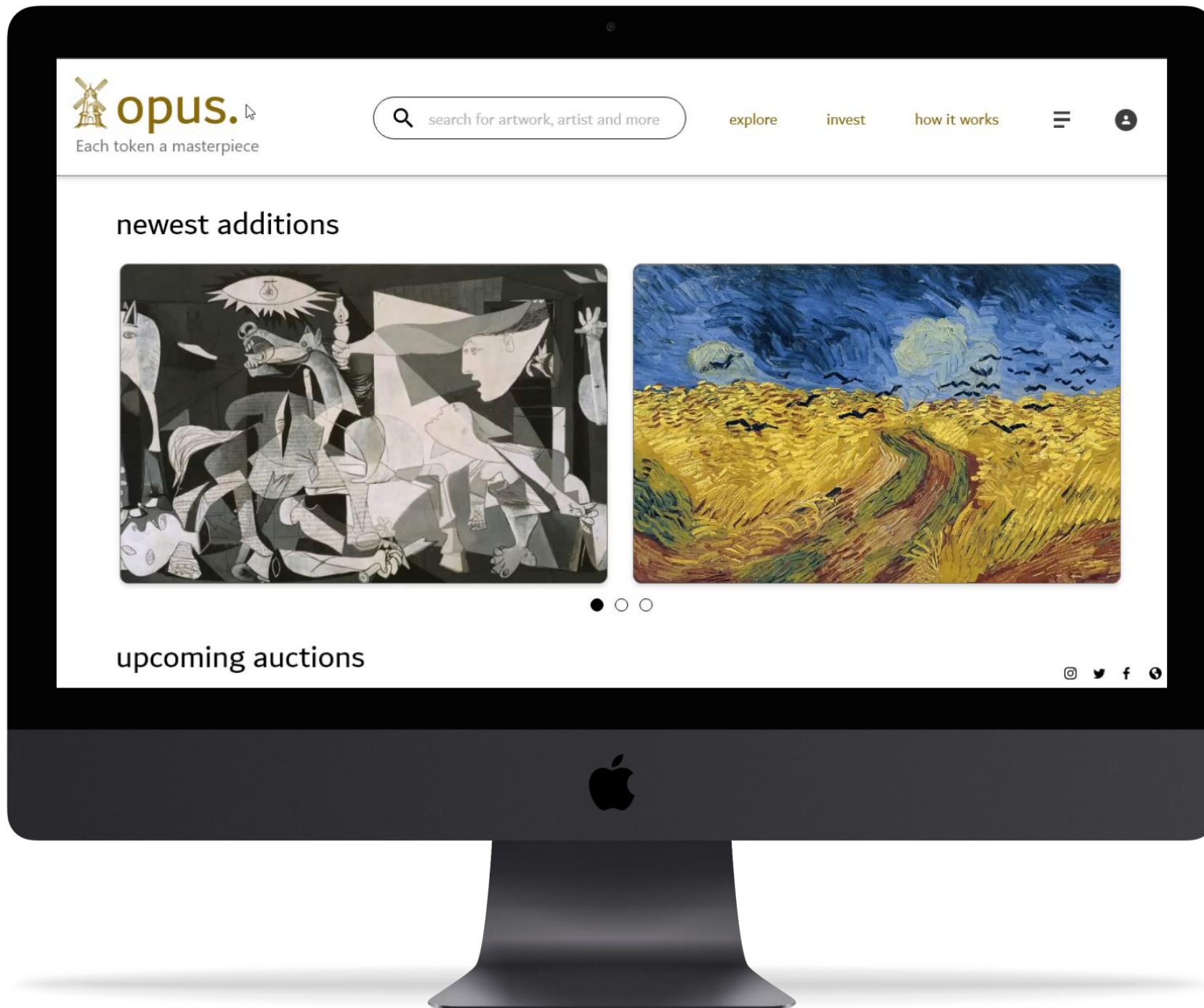
5

6

Option A**Option B**

Primary Issuance
Secondary Market

User Interface



1

2

3

4

Benefits

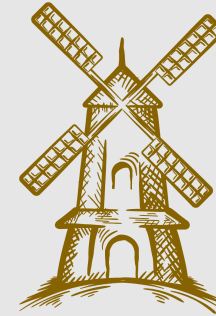
6



Investor



Custodian / Originator



Opus

Liquidity

Accessibility

Usage Rights

Settlement

% of Auction proceeds

Transparency

Secondary Market fees

1

2

3

4

5

Perspectives



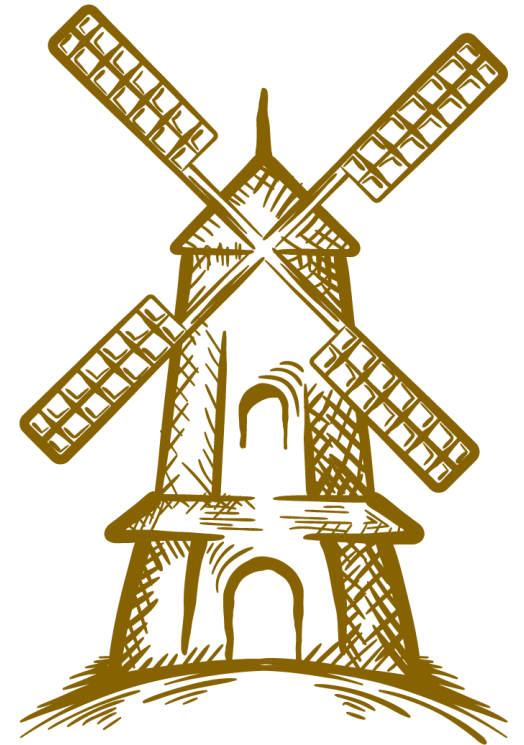
Other assets



Pricing mechanisms



Integrate insurance solutions



Opus - The future of the art market?

Thank you for your
attention.

BearingPoint®

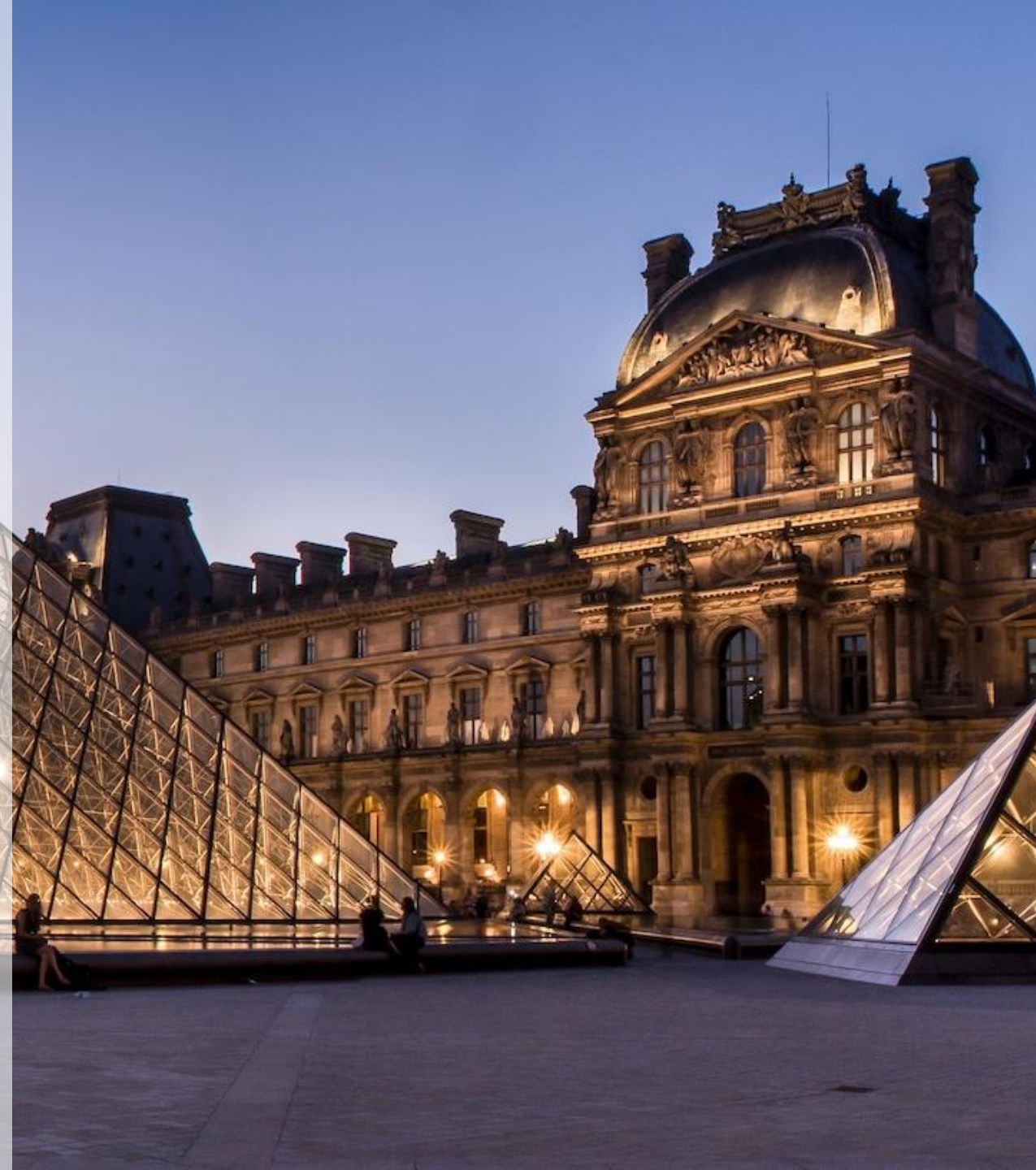


BLOCKCHAIN
Challenge



**University
of Basel**

Center for
Innovative Finance



References

McAndrew, Clare (2021). *The Art Market 2021 – An Art Basel & UBS Report*.

[https://d2u3kfwd92fzu7.cloudfront.net/The Art Market 2021.pdf](https://d2u3kfwd92fzu7.cloudfront.net/The_Art_Market_2021.pdf)

Radomsky, W., Cooke, A., Castonguay, P., Therien, J., Binet, E. and Sandford, R.

(2018). *EIP-1155: ERC-1155 Multi Token Standard*. <https://eips.ethereum.org/EIPS/eip-1155>

Icons designed by Freepik <https://www.freepik.com> from Flaticon

<https://www.flaticon.com/>