ANALYZING THE USE OF BLOCKCHAIN TO STORE CERTIFICATIONS AND IMPROVE EFFICIENCY IN STC

MATTHEW ADRAGNA, MICHAEL EMERSON, BERNHARD NORDEMANN

WHO ARE WE?

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Computer Science Major,
Junior @ WPI

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Computer Science Major,
Junior @ WPI

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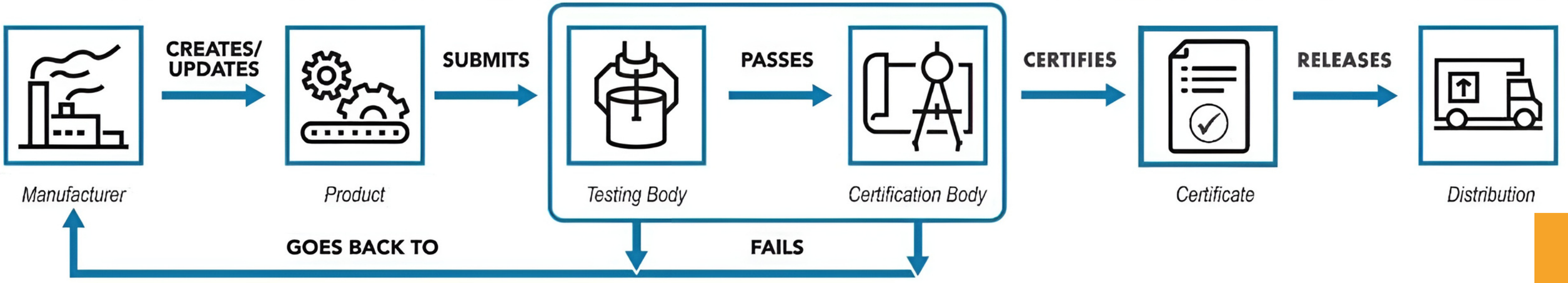
Computer Science Major,
Junior @ WPI

WHAT IS THE TIC INDUSTRY?

- Ensures products meet standards
- Creates certifications consumers trust

香港安全標誌
Hong Kong Safety Mark

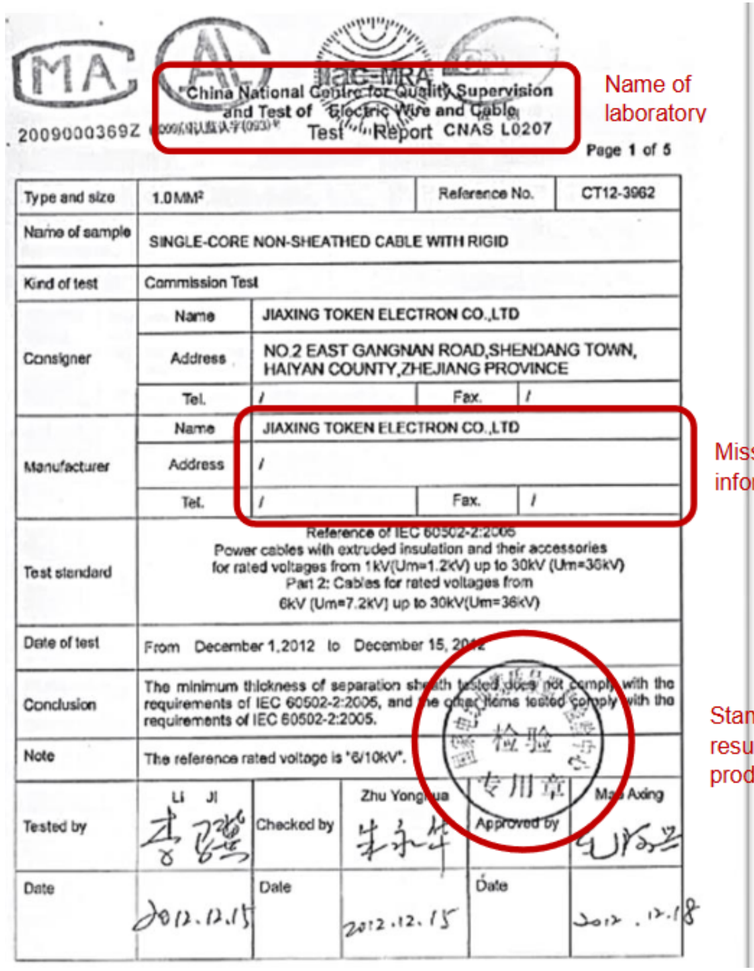
HOW DOES THE TIC INDUSTRY OPERATE?



CERTIFICATION FRAUD

Incorrect
Flusnmount

Correct
Flush-mount



MA

IAC-MRA

"China National Centre for Quality Supervision and Test of Electric Wire and Cable"

2009000369Z

Test Report CNAS L0207

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Name of laboratory

Type and size	1.0MM²		Reference No.	CT12-3962
Name of sample	SINGLE-CORE NON-SHEATHED CABLE WITH RIGID			
Kind of test	Commission Test			
Consigner	Name	JIAXING TOKEN ELECTRON CO.,LTD		
	Address	NO.2 EAST GANGNAN ROAD,SHENDANG TOWN, HAIYAN COUNTY,ZHEJIANG PROVINCE		
	Tel.	/	Fax.	/
Manufacturer	Name	JIAXING TOKEN ELECTRON CO.,LTD		
	Address	/		
	Tel.	/	Fax.	/
Test standard	Reference of IEC 60502-2:2005 Power cables with extruded insulation and their accessories for rated voltages from 1kV(Um=1.2kV) up to 30kV (Um=36kV) Part 2: Cables for rated voltages from 6kV (Um=7.2kV) up to 30kV(Um=36kV)			
Date of test	From December 1,2012 to December 15, 2012			
Conclusion	The minimum thickness of separation sheath tested does not comply with the requirements of IEC 60502-2:2005, and the other items tested comply with the requirements of IEC 60502-2:2005.			
Note	The reference rated voltage is "6/10kV".			
Tested by	Li Ji	Checked by	Zhu Yonghua	Approved by Ma Axing
Date	2012.12.15	Date	2012.12.15	Date 2012.12.18

Missing address and contact information for manufacturer.

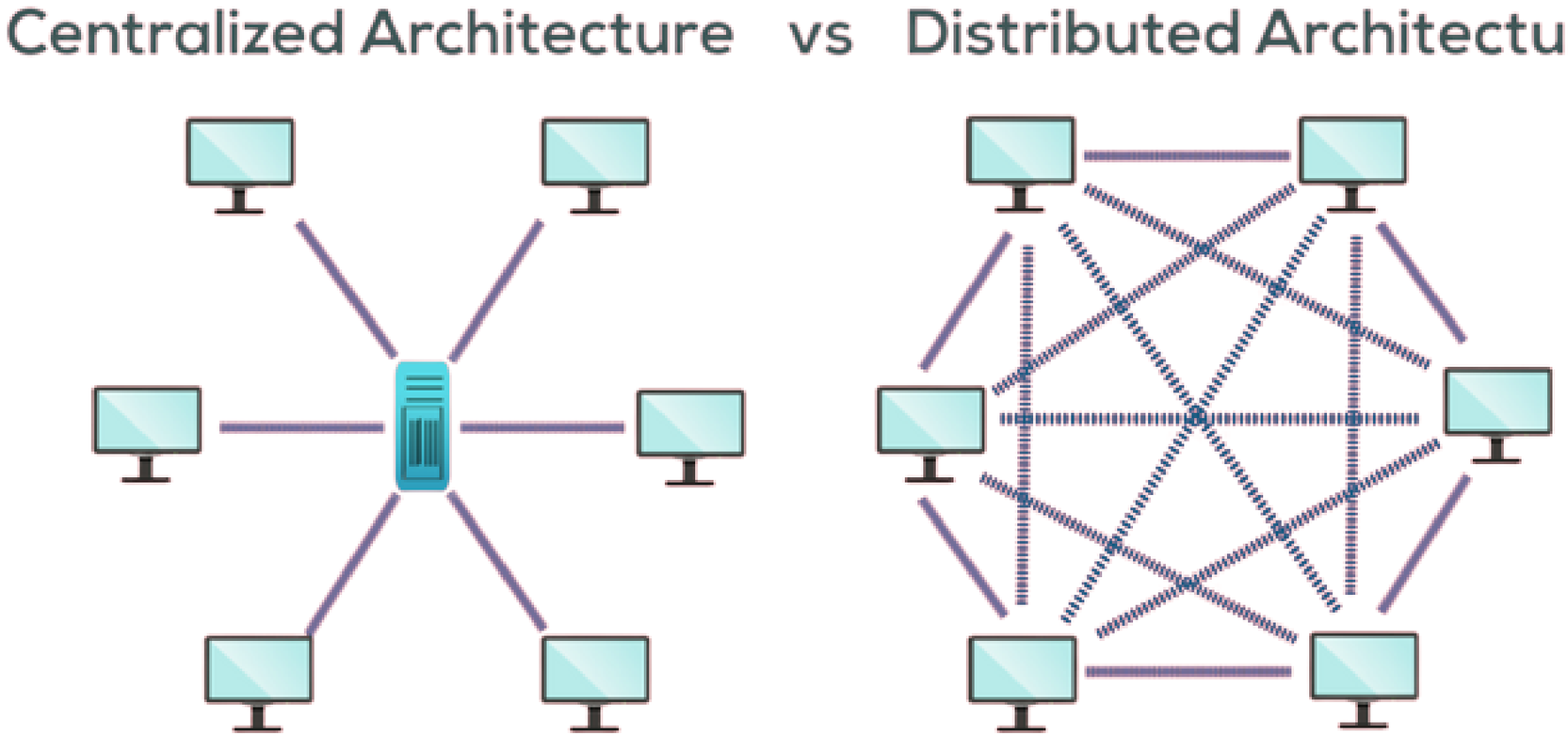
Stamp covers up the test results that indicate that the product does not comply.

Our Project

ANALYZING THE USE OF BLOCKCHAIN TO STORE CERTIFICATIONS AND IMPROVE EFFICIENCY IN STC

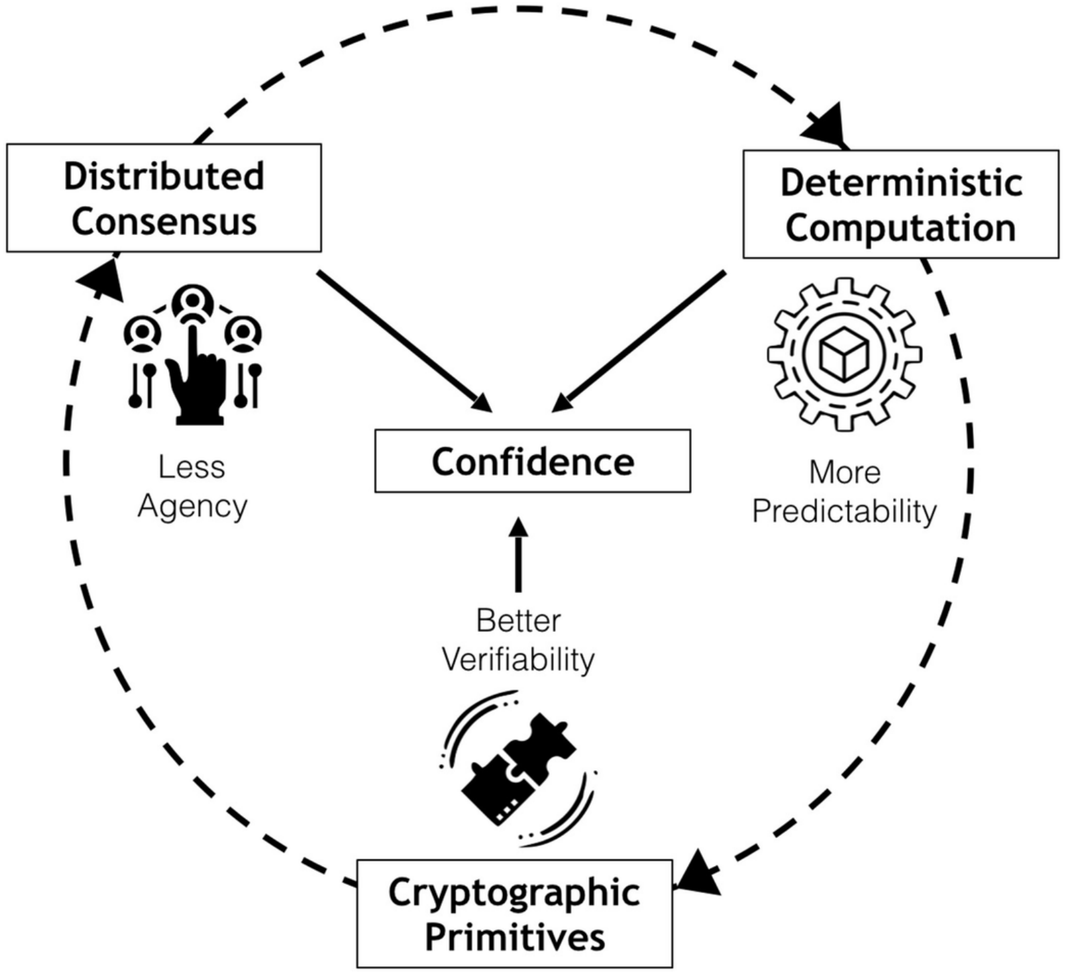
WHAT IS BLOCKCHAIN?

1. Decentralized

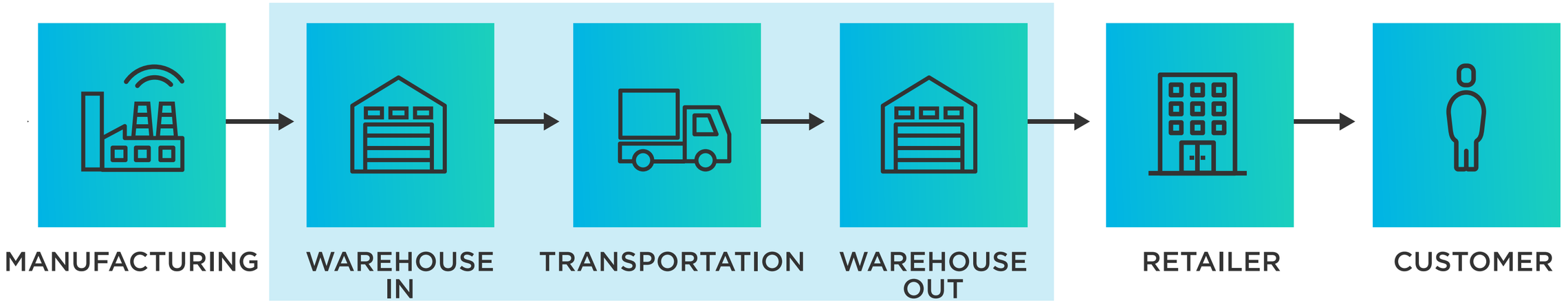


WHAT IS BLOCKCHAIN?

2. Secure

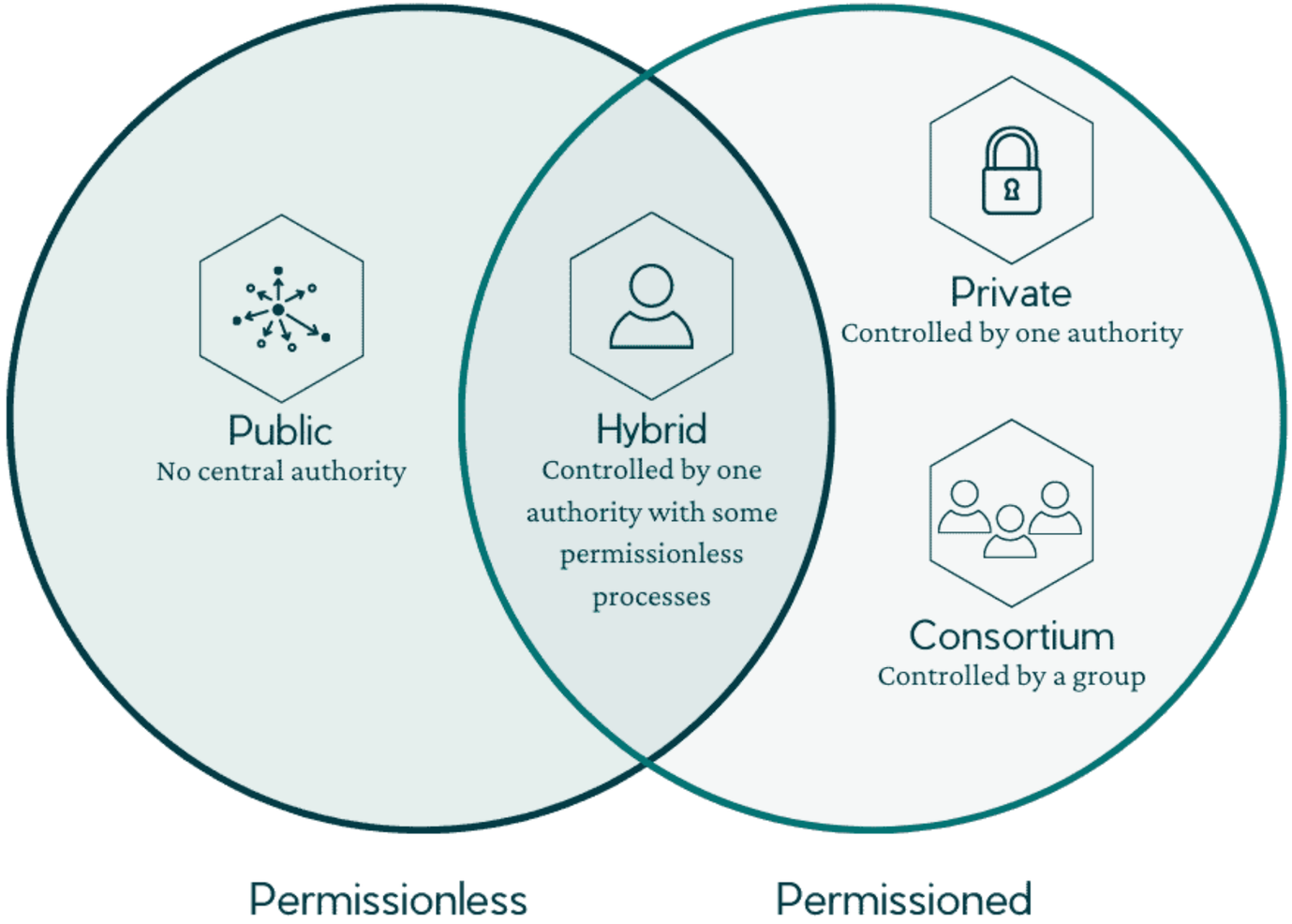


3. Transparent



SMART CONTRACTS

TYPES OF BLOCKCHAIN



OUR OBJECTIVES

1. **Build Knowledge About Business Operations and the TIC Industry**

2. **Identify the Benefits of Blockchain Implementation**

3. **Identify the Requirements of Successfully Implementing Blockchain**

BENEFITS

- Protect a firm's business dealings
- Increase efficiency of internal processes
- Remove need for third parties
- Facilitate trust between cooperating parties
- Can automate workflows

DRAWBACKS

- More expensive than traditional storage techniques
- Slow / Varied transaction speed
- Lack of confidentiality in public solution
- Parties owning 51%+ of the blockchain can modify it

Mavis Yik
Project Manager, HerBChain

Greg Solt
Director of Technology, DigiKerma
Senior Solutions Architect, Verizon

Blockchain is best used:

01

In a process with large number of steps

02

To track goods exchanging hands

03

To facilitate trust and synchronicity of data

DEVELOPMENT COSTS

HK$1.5 - HK$2.5 MILLION

POSSIBLY MORE THAN HK$4-5 MILLION

ONGOING COSTS

HK$0.18/GB/MONTH

AMAZON S3 CLOUD STORAGE

HK$785/GB

ESTIMATE FROM IBM (2018)

CONCLUSIONS

1 **Blockchain does not fit in STC to store certifications**

2 **Blockchain would fit in a collaborative industry wide blockchain**

THANK YOU


Hong Kong
Certification Centre
香港認証中心
Hong Kong
Testing Centre