Digitalization of Property Valuation Reports: Benefits to Banks, Buyers, and Sellers

Tan Sian Lip

6th November 2024

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Digitalisation through Standards

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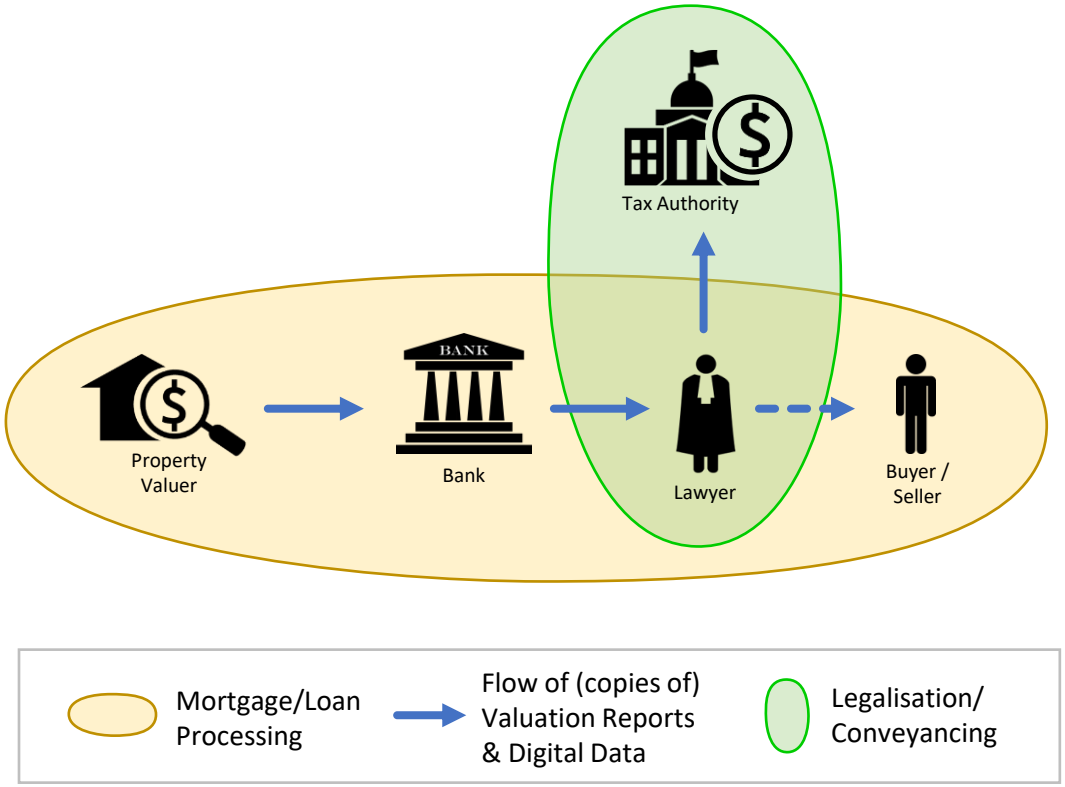
Digital Valuation Report/Data Flow - Challenges & Issues

(simplified buyer-mortgage flow)



How to get valuation data into all of these different IT systems?

Without manual data-transcription or data-entry?

Without all of them connecting to one exchange IT platform?

And know that their copies are authentic?

And accommodate those who can't use digital data?

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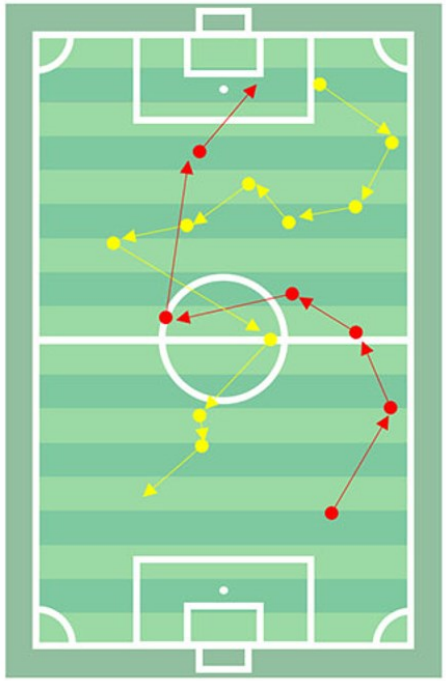
Ecosystem-wide

Why not One Data-Exchange Platform?

- *Fragmented business-regulatory ecosystem – with or without IT*
- *No single regulator over property transaction value-chains – even in a single jurisdiction*

Property Transactions



naturally without central control or coordination

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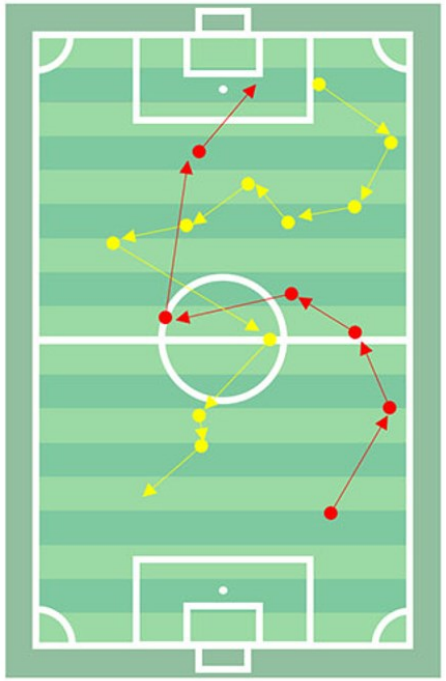
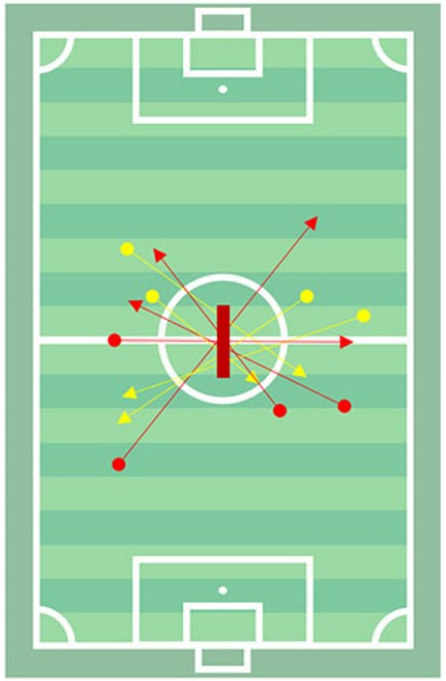


naturally without central control or coordination

vs

Centralised IT "Platforms"



unsuited for achieving ecosystem-level digitalization

- *No Business Ecosystem has yet been digitalized by Centralized IT Platforms – only fragments of them*
- *Platform operators resist interoperating and sharing data with other platforms for competitive reasons & to keep their customers locked-in*

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Ecosystem-wide

Why not One Data-Exchange Platform?

Property Transactions

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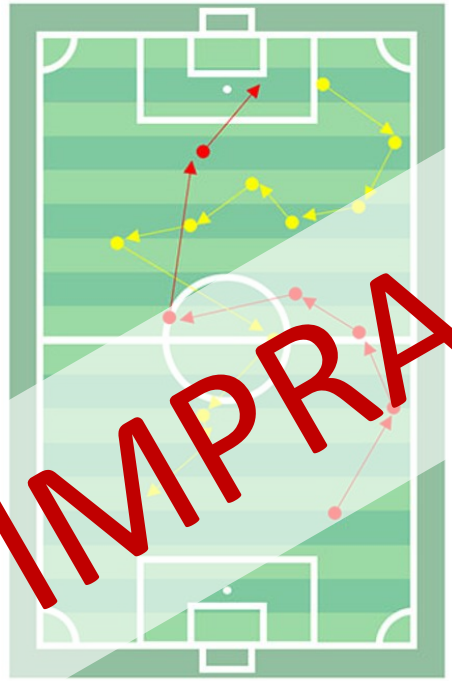

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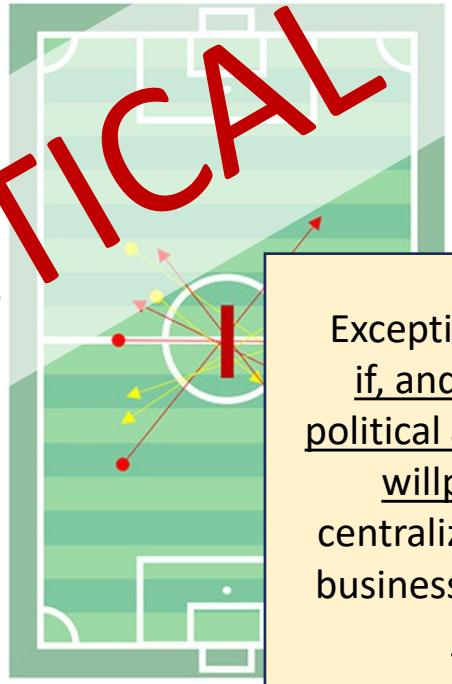
Centralised IT "Platforms"



- *No business ecosystem has yet been digitalized by centralized IT Platforms – only fragments of them*
- *Platform operators resist interoperating and*

unsuited for achieving ecosystem-level digitalization

IMPRACTICAL

Exception: this can work if, and only if, there is political and administrative willpower to force centralization on so many business sectors and their regulators

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Solution: Standardized Digital ~~Documents~~ Valuation Reports

Three Basic Qualities

Human-Readable

*Machine-Interpretable**

Electronically Verifiable

* *with standardized machine-interpretable data-fields & formats*

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Benefit to Valuers

Protection from Fraud & Misrepresentation

- *Alterations to any copy of Valuation Reports sent out to banks (etc) are easily detected because electronic verification of their integrity and source is easily done*
- *Disputes over versions are easily settled*

Bank (etc) Plug-n-Play

- *The Standard is free-to-use by any bank*
- *Valuers can communicate valuation report data to any bank (etc) that has implemented the standard*
- *Participation in a data-exchange platform is not necessary*
- *Standard compliant reports can be exchanged via any mode of data-transfer/transport: APIs, data-exchange platforms, email, instant messaging*

Backward Compatible

- *Manual processes and business counterparties that have no business need to adopt the standard can still process valuation reports visually/manually because they are (still) human-readable*

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Benefit to Banks

Stronger Internal Controls

- *Alterations to any copy of Valuation Reports sent out to banks (etc) are easily detected because electronic verification of their integrity and source is easily done*
- *Disputes over versions are easily settled*

Efficient & Error-Free Data Capture

- *Structured valuation report data can be easily and reliably extracted without slow and error-prone manual data-entry and/or manual data-transcription efforts*
- *More accurate lower liability than OCR methods*

Valuer Plug-n-Play

- *Digital valuation reports can be received from any valuer using any document-exchange method as long as they can produce standard-compliant valuation reports*
- *Valuers can use any VMS on the market as long as they comply with the standard*

Lawyer (etc) Plug-n-Play

- *Banks can forward valuation reports to any lawyer or regulators that have implemented the standard knowing they can verify their authenticity too*

Backward Compatible

- *Manual processes and business counterparties that have no business need to adopt the standard can still process valuation reports visually/manually because they are (still) human-readable*

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Benefit to Lawyers

Better Internal Control

- *Alterations to any copy of Valuation Reports are easily detected because electronic verification of their integrity and source is easily done*

Efficient & Error-Free Data Capture

- *Structured valuation report data can be easily and reliably captured by law firms' PMS (practice management systems) without slow and error-prone manual data-entry and/or manual data-transcription efforts*
- *More accurate lower liability than OCR methods*

Valuer Plug-n-Play

- *Digital valuation reports can be received from any valuer using any document-exchange method as long as they can produce standard-compliant valuation reports*
- *Valuers can use any VMS on the market as long as they comply with the standard*

Regulator (etc) Plug-n-Play

- *Lawyers can forward valuation reports to regulators or any other lawyers that have implemented the standard knowing they can verify their authenticity too*

Backward Compatible

- *Manual processes and business counterparties that have no business need to adopt the standard can still process valuation reports visually/manually because they are (still) human-readable*

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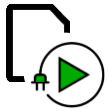
Summary of Benefits

Trust & Safety

Safer Business using Electronically Verifiable Documents

Ease of Doing Business

Any-System to Any-System "Plug-n-Play" Digital Documents



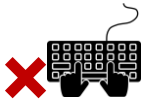
No custom IT work to connect with each new partner's IT system

Backward compatibility between Modern & Legacy Business Methods

Digital Efficiency

No paper-bound processes

No manual data-entry



Flow of Digital Data

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Key Outcomes

Digitalisation

Flow of (standardised) Data through Supply-Chain

Digitally Verifiable Documents

Market Friendly

Data Ownership & Control

Customer Choice & Flexibility

Easy Adoption & Usage

Any-System to Any-System "Plug-n-Play" Digital Documents

No custom IT work to connect with each new partner's IT system

Old & New Ways Working Together

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FAQ

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Which Electronic Copy is “Good to Go”?

Any and All

Verified Copies!

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How to Receive Them?

Any Way
You Want!

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How to keep your data private?

Protect Your Own
Valuation Management System!

Only Send Data to
Authorised Parties!

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Similar Standard from a Different Industry

New Singapore National Standard for
Digital Bunkering Documents (Dec 2024)

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Standards also help ensure interoperability as MPA implements Digital Bunkering initiatives to boost efficiency & productivity and increase transparency

Singapore Standards Council | SCIC SINGAPORE CHEMICAL INDUSTRY COUNCIL | Standards Development Organisation

SUPPORTING SINGAPORE'S MARITIME DIGITALISATION

NEW

Digital Bunkering

- A new **Singapore Standard on Specification for digital bunkering supply chain documentation** to be published.
- This standard provides specifications and requirements for the main types of digital documents utilised and exchanged within bunkering supply chains, such as eBDN, aligning with established business practices and bunkering standards.

REVISED

Mass Flow Metering

- The SS 648 Code of practice for bunker mass flow metering was **revised in 2024** to incorporate digital bunkering workflow and processes.
- This standard provides guidance on Metering system selection, installation and acceptance test requirements, metering procedures during bunker delivery, dispute handling, and bunker quality specifications including sampling process of bunkering.

8

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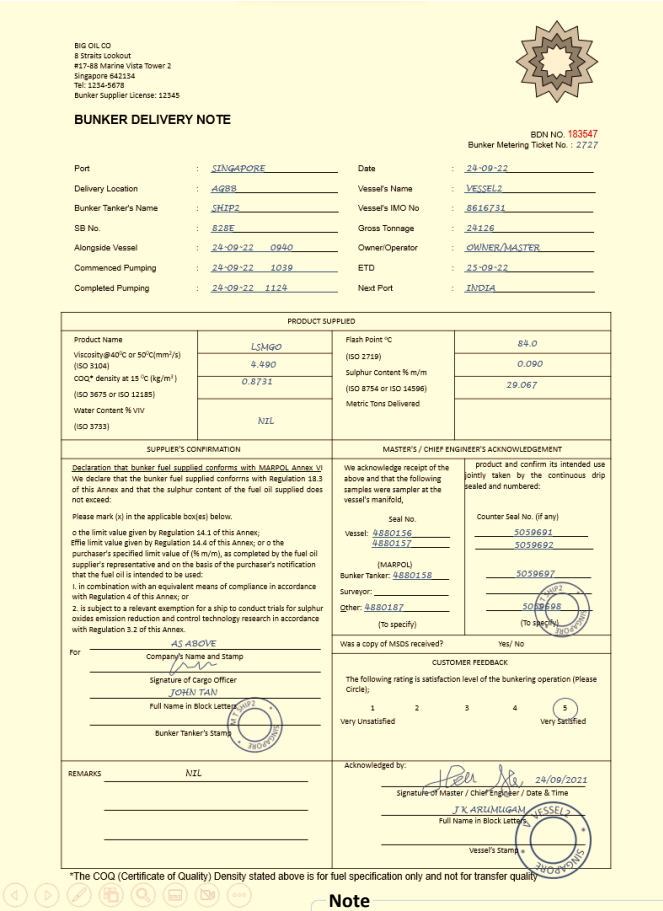
human-readable



BIG OIL CO
8 Straits Lookout
#17-88 Marine Vista Tower 2
Singapore 642134
Tel: 1234-5678
Bunker Supplier License: 12345

BUNKER DELIVERY NOTE

BDN NO. 183547
Bunker Metering Ticket No. : 2727

Port	:	SINGAPORE	Date	:	24-09-22
Delivery Location	:	AQ88	Vessel's Name	:	VESSEL2
Bunker Tanker's Name	:	SHIP2	Vessel's IMO No	:	8616731
SB No.	:	828E	Gross Tonnage	:	24126
Alongside Vessel	:	24-09-22 0940	Owner/Operator	:	OWNER/MASTER
Commenced Pumping	:	24-09-22 1039	ETD	:	25-09-22
Completed Pumping	:	24-09-22 1124	Next Port	:	INDIA

PRODUCT SUPPLIED

Product Name	LSMGO	Flash Point °C (ISO 2719)	84.0
Viscosity@40°C or 50°C(mm²/s) (ISO 3104)	4.490	Sulphur Content % m/m (ISO 8754 or ISO 14596)	0.090
COQ* density at 15 °C (kg/m³) (ISO 3675 or ISO 12185)	0.8731	Metric Tons Delivered	29.067
Water Content % V/V (ISO 3733)	NIL		

SUPPLIER'S CONFIRMATION

Declaration that bunker fuel supplied conforms with MARPOL Annex VI
We declare that the bunker fuel supplied conforms with Regulation 18.3 of this Annex and that the sulphur content of the fuel oil supplied does not exceed:

Please mark (x) in the applicable box(es) below.

o the limit value given by Regulation 14.1 of this Annex;
Effie limit value given by Regulation 14.4 of this Annex; or o the purchaser's specified limit value of (% m/m), as completed by the fuel oil supplier's representative and on the basis of the purchaser's notification that the fuel oil is intended to be used:
i. in combination with an equivalent means of compliance in accordance with Regulation 4 of this Annex; or
2. is subject to a relevant exemption for a ship to conduct trials for sulphur oxides emission reduction and control technology research in accordance with Regulation 3.2 of this Annex.

For AS ABOVE
Company's Name and Stamp

Signature of Cargo Officer

JOHN TAN
Full Name in Block Letters

Bunker Tanker's Stamp

MASTER'S / CHIEF ENGINEER'S ACKNOWLEDGEMENT

We acknowledge receipt of the above and that the following samples were sampler at the vessel's manifold,

Seal No.
Vessel: 4880156
4880157
(MARPOL)
Bunker Tanker: 4880158
Surveyor:
Other: 4880187
(To specify)

product and confirm its intended use jointly taken by the continuous drip sealed and numbered:

Counter Seal No. (if any)
5059691
5059692
5059697
5059698
(To specify)

Was a copy of MSDS received? Yes/ No

CUSTOMER FEEDBACK

The following rating is satisfaction level of the bunkering operation (Please Circle);

1 2 3 4 (5)
Very Unsatisfied Very Satisfied

REMARKS NIL

Acknowledged by:

24/09/2021
Signature of Master / Chief Engineer / Date & Time

J K ARUMUGAM
Full Name in Block Letters

Vessel's Stamp

*The COQ (Certificate of Quality) Density stated above is for fuel specification only and not for transfer quality

Note

Human-readable information (including business data and format) are governed by other standards like SS648 and accepted business practices


```
{
  "bdn_no": "083537",
  "bunkeringTicket_no": 1726,
  "port":"SINGAPORE",
  "deliveryLocation": "AEBB",
  "bunkerTankerName": "SHIP1",
  "sb_no": "717I",
  "alongSide_vessel": "24-09-22 0750",
  "commencedPumping": "24-09-22 0849",
  "completedPumping": "24-09-22 0934",
  "date": "24-09-22",
  "vesselName": "VESSEL2",
  "vessel_IMO_no": 8616731,
  "grossTonage": 33126,
  "owner/operator": "OWNER/MASTER",
  "etd": "25-09-22",
  "nextPort": "INDIA",
  "productSupplied":{
          "productName": "LSMGO",
          "viscosity": "4.490",
          "density": "0.8731",
          "water_content": "NIL",
          "flash_point": "84.0",
          "sulphur_content": "0.090",
          "metric_tons": "29.067"
          },
   "vessel confirmation" : {
          "vessel" : [ { "seal" : "4880156" , "counterseal" : "5059691" } ,
                       {"seal" : "4880157", "counterseal" : "5059692" } ],
          "bunker tanker" : [ { "seal" : "4880158", "counterseal" : "5059697 } ],
          "other" :  [ { "seal" : "4880187", "counterseal" : "5059698" } ]
          },
   "supplier confirmation" : {
          "signatory name" : {
                "name" : "JOHN TAN",
                "company name" : "BIG OIL CO"
                }
          "date" : "24-09-22 0934",
          "purpose" : "witness"
          }
...
```


Note

JSON shown is non standard-compliant;
for illustrating dual nature of standard-compliant bunkering documents only

machine-interpretable

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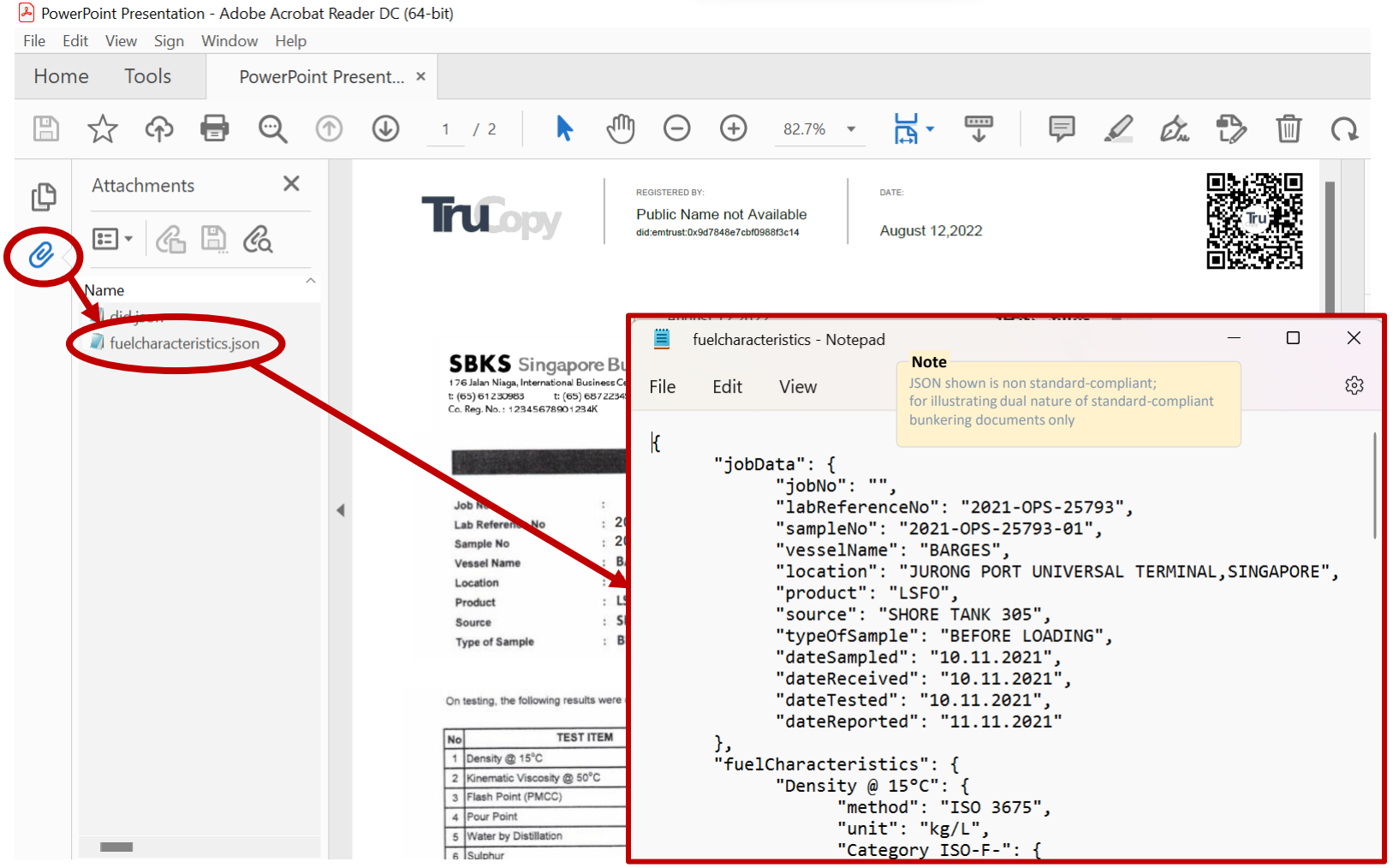

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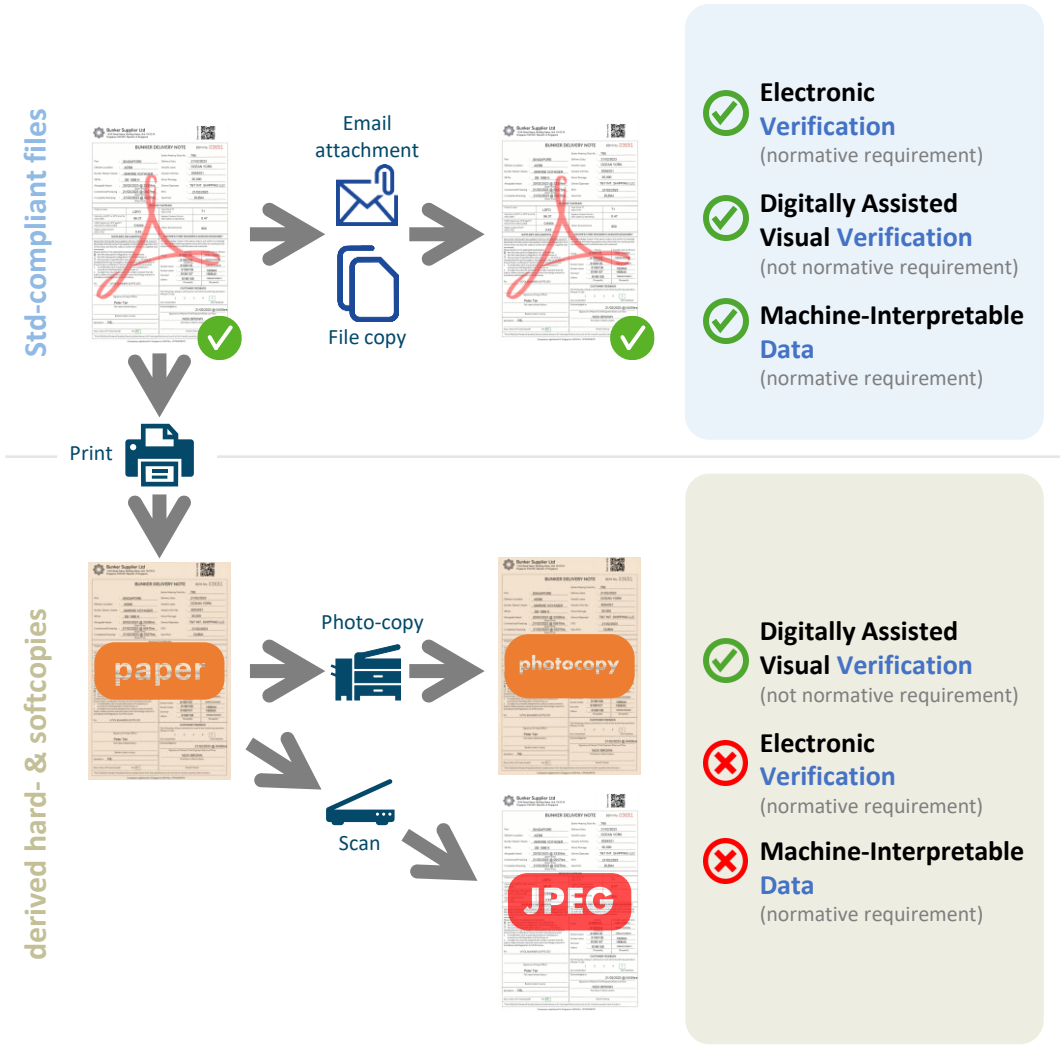
Protection & Data within Different Document-types



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Summary

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