Emerging technologies
Enabling better evaluation with blockchain
Developing the accountancy profession the world needs

219,000 members
527,000 students
179 countries

110 offices and centres
7,571 Approved Employers
328 Approved Learning Partners
ACCA insights: answering today’s questions, preparing us for tomorrow

- For everyone interested in the future of accountancy
- Answers to the big questions around being an accountant
- Share our findings in the media, in reports, at events and presentations
- Reach and influence for a diverse global viewpoint
Where to find us (1/2)

accaglobal.com/insights
Where to find us (2/2)

ACCA Insights App – content on the move!

- 55k+ users globally
- 200+ countries

<table>
<thead>
<tr>
<th>Users</th>
<th>Sessions</th>
<th>Screen Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>55,614</td>
<td>630,287</td>
<td>790,036</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Screens / Session</th>
<th>Avg. Session Duration</th>
<th>% New Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.25</td>
<td>00:04:06</td>
<td>7.46%</td>
</tr>
</tbody>
</table>

92.5% Returning Users, 7.5% New Users
What’s changing in the future?

Installed number of devices, Internet of Things (IoT) bn

- 2015: 15.4 bn
- 2020: 30.7 bn
- 2025: 75.4 bn

CAGR* = 17%

Source: IHS

*Compounded Average Growth Rate

A lot more data!  Process and Impact Evaluation
Blockchain ≠ Bitcoin

Blockchain ↔ DLT
✓ Set of records  ✓ In digitised format
2 of 7 – Distributed

- Shared common view
- Updated at same time for everyone
3 of 7 – Network

- Public /open
- Private/permissioned
4 of 7 – Immutable

- Permanent audit trail
- Append-only mode
Certainly! Here is the text from the image:

- Restricting access
- Data protection: commercial use cases
6 of 7 – Consensus

- Decentralised P2P
- Hashing
✓ Eg Smart contracts
✓ Auto triggers versus legal contracts
How might distributed ledgers relate to superior audit and monitoring of data held? (1/2)

<table>
<thead>
<tr>
<th>AUDIT ASSERTION</th>
<th>DESCRIPTION</th>
<th>POTENTIAL FOR DIRECT BENEFIT FROM DISTRIBUTED LEDGERS (INDICATIVE VIEW)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Completeness</td>
<td>All transactions are recorded in the financial statements</td>
<td>✖️ ✔️</td>
</tr>
<tr>
<td>2 Occurrence</td>
<td>The transactions in the financial statements actually happened</td>
<td>✔️ ✔️ ✔️</td>
</tr>
<tr>
<td>3 Valuation</td>
<td>Items in the financial statements have been included at appropriate amounts</td>
<td>✔️</td>
</tr>
<tr>
<td>4 Classification and understandability</td>
<td>Financial information is correctly categorised and disclosures are clearly communicated</td>
<td>✔️</td>
</tr>
<tr>
<td>5 Accuracy</td>
<td>Data is recorded at the correct amounts, which are verifiable in source documents</td>
<td>✔️ ✔️</td>
</tr>
<tr>
<td>6 Rights and obligations</td>
<td>Correctly establishing right to use or dispose of assets as well as obligations to pay off liabilities</td>
<td>✔️</td>
</tr>
<tr>
<td>7 Cut-off</td>
<td>Recording of transactions for the correct accounting period</td>
<td>✔️ ✖️ ✖️</td>
</tr>
</tbody>
</table>

* More ✔️ indicates greater potential for direct benefit. Excludes indirect benefit where DL might improve data quality in general terms which creates knock-on benefits.

Process evaluation and impact evaluation
How might distributed ledgers relate to superior audit and monitoring of the data held? (2/2)

- Immutability
- Sampling
- Timing
- True and fair view

Process

Impact
Use cases: using DLs for right reason

**Fear of missing out**
Shiny new tool that must be tried out

**Asking the question for my answer**
Force-fitting into a situation

**Sledgehammer to kill an ant**
Too sophisticated for problem at hand
Uganda – dealing with fake drugs

10% of the drugs prescribed in the country have substandard or counterfeit copies of them sold on the market.

- Establish provenance
- Identify counterfeit drugs
- Preventing future contamination
- Weaken organised crime
UK – transparency in the food chain

'Our approach has been to develop data standards with industry that will make theory reality and I'm delighted that we've been able to show that blockchain does indeed work in this part of the food industry. '

- Track distribution of meat in cattle slaughterhouse
- Requires a lot of inspection and collation of results
- Importance of being able to trace food back to its source in order to increase consumer trust.
Project UBIN

Singapore – greater efficiency in financial transactions

The eventual goal is to help develop simpler and more efficient alternatives to today’s systems based on digital central bank issued tokens.

- Make financial transactions and processes more efficient and at a lower cost
- Decentralised inter-bank payment and settlements including netting in a manner that preserves privacy
- Partnering with 11 financial institutions and 5 technology companies
Programme evaluation when using DLT can involve new or additional requirements

- Building knowledge of how the technology works
- Understand where it's useful and where it isn’t
- Recognise role of human oversight and judgement
- Compare against status quo, eg with control groups
Evolution of DLT – key considerations for the future

- Scaling/mainstream adoption
- Balanced regulation
- The big hack
- Physical versus digital
- Public versus private
- Fail fast
- Risk capital
- Eco-system impact
Thank you