Information Governance (CIS3005-N)

Week 2

Principles of Information Governance

Schedule – Week 2

Week	Date	Lecture, IT Lab & Weekly Feedback on Progress
1	23rd Jan 2025	Welcome, **Introduction & Case Studies**
2	30th Jan 2025	Principles of information governance, **ICA Released, Q&A**
3	6th Feb 2025	Risk Management, **ICA Development**
4	13th Feb 2025	Social engineering 1, **ICA Development**
5	20th Feb 2025	Social engineering 2, **ICA Development**
6	27th Feb 2025	Security, **ICA Development, Review & Feedback 1**
7	6th Mar 2025	ISO 27k 1, **ICA Development, ICA Development, Review & Feedback 2**
8	13th Mar 2025	Managing change, **ICA Development, Review & Feedback 3**
9	20th Mar 2025	ISO 27k 2, **ICA Development, Review & Feedback 4**
10	27th Mar 2025	Compliance and legal issues, **ICA Development, Review & Feedback 5**
11	3rd April 2025	Business Continuity and Disaster recovery planning, **ICA Development, Review & Feedback 6**
Spring Break (3 weeks)		
12	1st May 2025	ICA Q&A, **ICA Development, Review & Feedback 7**
ICA Hand-in – Friday 2nd May 2025, 4pm via Blackboard		

Recap – Homework (Data Integrity)

Read the following articles before next week:

1. Breached Trust, Broken Data: The Post Office Fiasco
2. The Post Office Horizon IT Scandal, part 1 – errors and accuracy
3. The Post Office Horizon IT Scandal, part 2 – evidence and the “off piste” issue
4. The Post Office Horizon IT Scandal, part 3 – audit, risk and perverse incentives

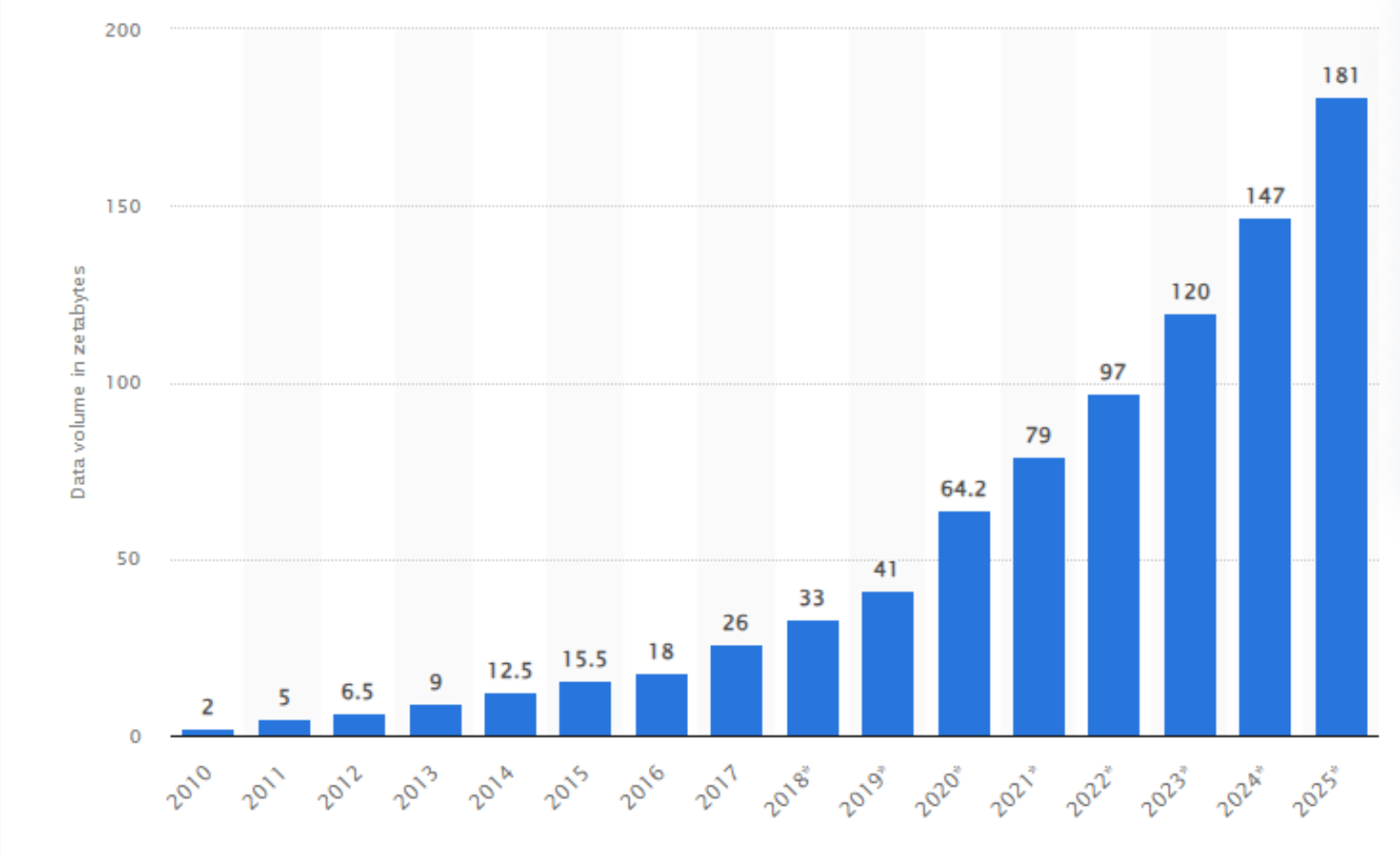
Lecture Aims

- To introduce and discuss principles of data governance
  - Integrity
  - Accessibility
  - Accuracy
  - Transparency
  - Auditability
  - Accountability
  - Standardisation
- To consider the data landscape and associated challenges
- To revisit the ICA requirements

Where is data encountered within a business?

- **Considering the University:**
  - Vice Chancellor?
  - School Deans?
  - Finance Department?
  - Catering outlets?
  - Academic lecturing staff?
  - IT Services?
  - Caretakers and cleaners?
  - Security?
  - Recruitment and Marketing?
  - Research students?

Volume of data/information created, captured, copied, and consumed worldwide from 2010 to 2020, with forecasts from 2021 to 2025 (in Zettabytes)



8 Bits	= 1 Byte
1024 Bytes	= 1 Kilobyte
1024 Kilobytes	= 1 Megabyte
1024 Megabytes	= 1 Gigabyte
1024 Gigabytes	= 1 Terabyte
1024 Terabytes	= 1 Petabyte
1024 Petabytes	= 1 Exabyte
1024 Exabytes	= 1 Zettabyte
1024 Zettabytes	= 1 Yottabyte
1024 Yottabytes	= 1 Brontobyte
1024 Brontobytes	= 1 Geopbyte

Data is a valuable asset

https://www.statista.com/statistics/871513/worldwide-data-created/

Integrity

- “The state of being whole or undivided” – Oxford English Dictionary
- “Internal consistency or lack of corruption in electronic data” – Oxford English Dictionary

- Accuracy, completeness and consistency of data throughout its lifecycle

In what domains or contexts would data integrity be critical?

Ensuring Data Integrity

- Educate staff/users
- Adopt a robust data governance framework
- Invest in the right tools and expertise
- Ensure regular backups
- Uninterruptible power supply
- Control the storage environment
- Keep an audit trail
- Keep an access catalogue

Accessibility

- Consider the ICA case study: how can the organisation ensure that data needed is accessible?
  - Intra-organisation
  - Inter-organisation
- What other organisations does the case study imply will need access to data?
- What would the consequences be if data is not available:
  - To control traffic light systems during a Police or Ambulance emergency?
  - When assessing an insurance claim?
  - When wanting to start your car
    https://www.fleetnews.co.uk/news/latest-fleet-news/electric-fleet-news/2021/11/22/app-outage-leaves-tesla-drivers-unable-to-start-their-cars

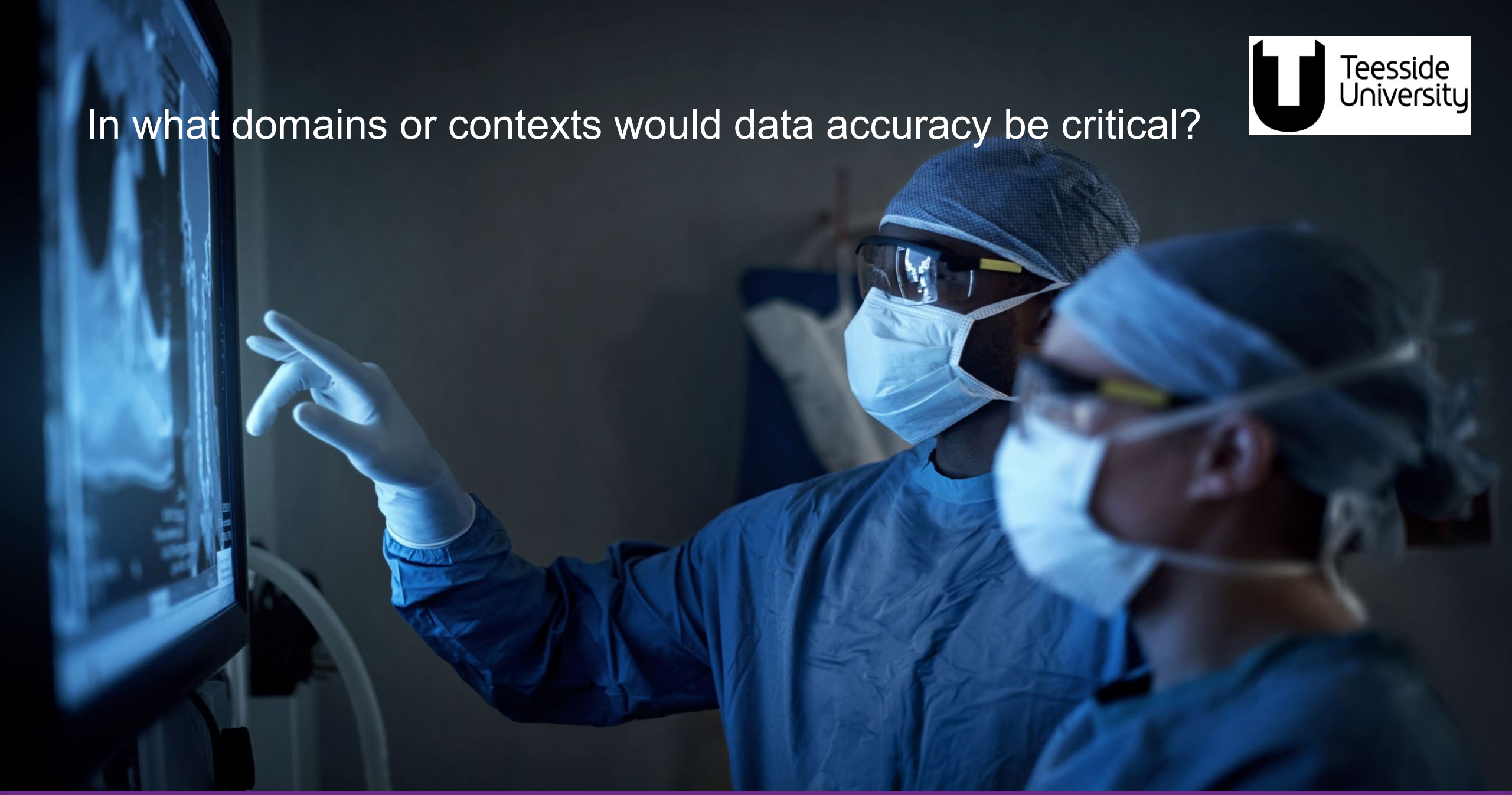
In what domains or contexts would data accessibility be critical?

Accuracy

- Good decision-making relies on accurate data
- Poor data entry practices
- Fractured, duplicated systems
- System bugs https://www.bbc.co.uk/news/business-56718036

Identify a worst-case scenario due to poor data accuracy

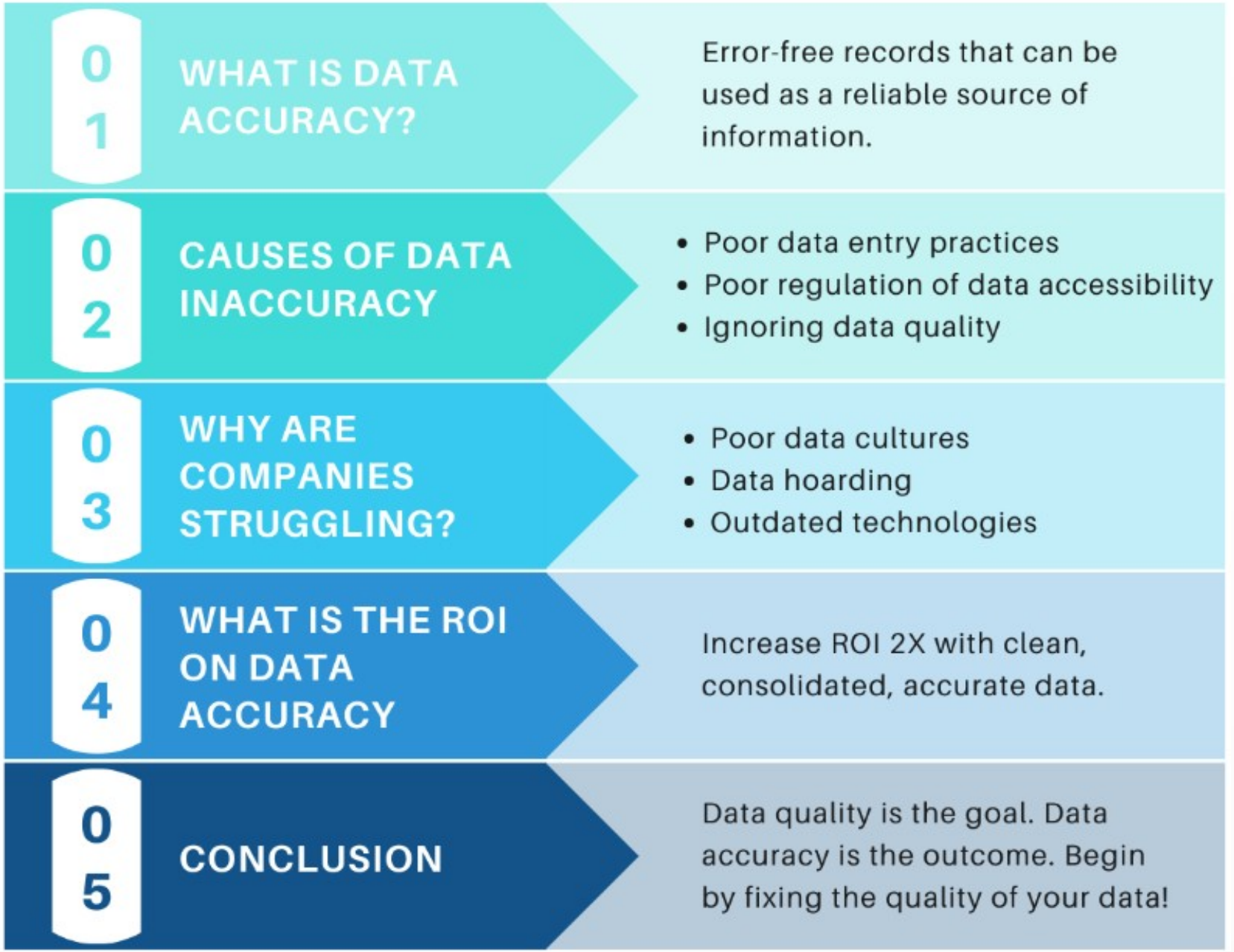
In what domains or contexts would data accuracy be critical?



Data Accuracy

A Quick Guide

Inaccurate data has real-world implications across industries. In law enforcement, inaccurate data could mean booking the wrong person for a crime. In healthcare, it could mean making a fatal mistake in patient care. In retail, it could mean making costly mistakes in business expansions. In finance, it could mean violating sanctions rules and lists.



Transparency

- Legal obligation to ensure that any information or communication relating to the processing of personal data is easily accessible and easy to understand, and that clear and plain language is used (GDPR)
- ICO (Information Commissioner's Office provides excellent guidance
- Data Protection information: https://www.gov.uk/data-protection

What is transparency?

Transparency is fundamentally linked to fairness. Transparent processing is about being clear, open and honest with people from the start about who you are, and how and why you use their personal data.

Transparency is always important, but especially in situations where individuals have a choice about whether they wish to enter into a relationship with you. If individuals know at the outset what you will use their information for, they will be able to make an informed decision about whether to enter into a relationship, or perhaps to try to renegotiate the terms of that relationship.

Transparency is important even when you have no direct relationship with the individual and collect their personal data from another source. In some cases, it can be even more important - as individuals may have no idea that you are collecting and using their personal data, and this affects their ability to assert their rights over their data. This is sometimes known as 'invisible processing'.

You must ensure that you tell individuals about your processing in a way that is easily accessible and easy to understand. You must use clear and plain language.

https://ico.org.uk/for-organisations/uk-gdpr-guidance-and-resources/data-protection-principles/a-guide-to-the-data-protection-principles/the-principles/lawfulness-fairness-and-transparency/

Auditability

- Why is auditability so important? Why keep an audit trail?
- What type of information should be kept in audit trails? Why?
- In what circumstances is an audit trail a legal requirement?
  - Consider the University:
    - What audit trails do you think we keep relating to student records and results?

Accountability

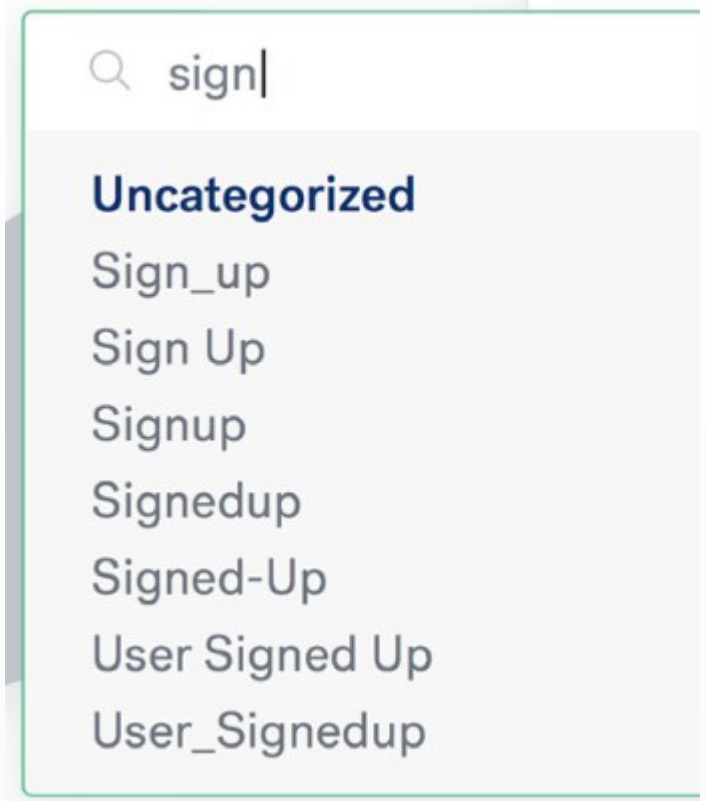
- What does this mean?

Accountability

- What does this mean?
- Organisations must take responsibility for data collected, used, processed and shared
- How is this governed?
  - Accountability is one of the UK's Data Protection Principles
    - Data protection policies and processes
    - Data protection by design
    - Contracts (e.g. where data sharing needs to occur)
    - Security measures
    - Audit trails
    - Reporting breaches
    - Regular reviews of all of the above
  - ICO's useful checklist: https://ico.org.uk/for-organisations/uk-gdpr-guidance-and-resources/accountability-and-governance/guide-to-accountability-and-governance/

Standardisation

- Naming conventions (important when data sharing)
  - Use consistent formatting
  - Helps prevent data loss and redundancy
  - Helps maintain integrity and accuracy
  - Detail is critical
  - Keep a log
    - E.g. in the research world this could be part of a Data Management Plan and must be evidenced during the ethical approval process



Having an information governance plan

- Founded upon strategic business objectives
  - Decisions around data governance are based on what the company wants to achieve, their resources, compliance requirements and regulations
- Policies and organisational processes
- Organisational infrastructure with defined roles
- Clear audit trail including, e.g. ‘ownership’, service catalogues, review periods, data sharing agreements etc.
- Continuous improvement
- Enables management and protection of data assets

Information Governance Plan

- Guidance from ISO Standards, industry best practice, associated frameworks (e.g. ITIL)
- Further reading (IBM guidance): https://www.ibm.com/blog/a-step-by-step-guide-to-setting-up-a-data-governance-program/

Assessment (100% ICA)

- You will receive an industry-based scenario and will be required to produce a professional data governance portfolio

    - Recommendations for operational and environmental security measures
    - Advice and guidance on legal and regulatory compliance
    - A framework to support the development of a Business Continuity and Disaster Recovery plan

****ICA completion guide now available on Blackboard****

Homework:

- Information Commissioner's Office – Case Studies and Examples relating to Data Sharing (useful for your assessment work) https://ico.org.uk/for-organisations/uk-gdpr-guidance-and-resources/data-sharing/case-studies-and-examples/
- Read the ICA completion guidance uploaded to Blackboard – in Week 2 learning Materials
- Complete your team presentation for week 3's practical session using the guidance in this week's practical brief

Teesside University

Any questions?