Workshop - Identify data that could/should be proof-chained (inc proof seal bundle)

Workshop overview **Author: Ian Taylor**

The purpose of this workshop is to consider/ identify within a business the different types of data that have risk applied to it and the workflows associated with this data.

We will then do a knowledge check and also look at 1 other example business models to identify which areas of their business have a need for compliance regulations, risk reduction and proof of activity for dispute resolution.

Background example Information

In this example, we will look at a typical organisation that has data risk and verification issues around its day-today workflow activities.

Our sample Company 2. - Food Supply Chain & Producer – Video Description- introduction to the original biltong company - a company overview

The Original Biltong is a food manufacturer that produces and distributes Biltong a South African dried cured meat. During their day to day business activities, they have to work within a number of regulatory frameworks and have to monitor compliance procedures to get a licence to trade from the local authority.

The requirement

The company needs to provide the provenance chain for all the activities it carries out monitoring how their food product and manufacturing process operates. This includes tracking how their product is received, processed, stored and distributed throughout their day to day activities as they prepare it for their customers.

They are also now looking to become registered with the British Retail Association as the next part of the business expansion strategy. This is so they can be considered as a supplier to large supermarket chains.

Their business workflow processes and data collection will be saved to the evident proof platform allowing them to very quickly produce a proof certificate confirming that all of this data and evidence has been stored immutably and that all checks have been carried out in accordance with the legal and licencing requirements.

So how do I identify which processes and data have risk associated with it?

Considerations

When we consider a specific workflow or process a company carries out in the course of its activities, we need to identify:

1. What type of data is being handled or generated?
2. What are the touchpoints that the data passes through?
3. The type of workflows that handle the data, generate data or repurpose data?
4. Any business information or derivative information that is extracted from or generated by the data and business workflows
5. The owners and controllers of the data
6. The geographical location of the data, what sovereignty it resides within
7. What risk is associated to these

In our example, we want to consider the process that the company goes through in order to carry out the required checks that are needed to be done on their Health & Safety procedures and food production processes.

Once we have looked at the workflow that is required to collect this data, we then need to consider the different applications that are used in this data collection process and this includes third-party applications or hardware such as iot devices.

When we map this out, we can then start to look at the areas of data that have risk around them and will need to be stored through the evident proof platform.

If there was no mandate in the above case then we would establish what proof looks like to the client by asking them what data would be requested by the client or regulatory body in the event that a challenge was made to the data that they had collected or the workflow process that they had carried out to collect this data.

Typical Questions to ask in this process could be: -

- *How are you currently managing your regulatory and compliance process?*
- *Which databases are being used to manage this data and report on these processes?*
- *Where is it stored?*
- *How is it stored - Is it stored in a centralised way?*
- *List the types of data that the clients generate/transact or receive in the business model*
- *Who has access to this and is this data easily accessible?*
- *Is this data stored in a number of disparate data sets that would need to be interrogated in order to prove that the regulatory and governance demands have been met?*
- *Who has responsibility and liability for the integrity and correct reporting of this data – including the way that it is recorded and managed?*
- *Identify and list the workflows that clients engage in. Do any of these require verification? Could any be disputed?*

So, while we carry out our fact find on their data and work proof process, we will be looking at the data that is collected internally through their own business applications and also data that is produced through hardware devices such as IoT sensors that they use to monitor their manufacturing process.

How this works in the real world - See video Introduction

1. **The first part of Wayne's business requires him to do the purchase ingredients used in the food production process such as meat spices and herbal mixes**

Q - This is the first touchpoint to consider is the consideration of the provenance of the meat - do you think that this information should be included in your data risk framework?

Yes - As part of the compliance process, his suppliers have to provide a full provenance trial to the meat that he is purchasing he could record this data on the evident proof platform to show the organic nature and provenance of the meat and herb products that he is purchasing.

Example: - If a customer was to become ill because some of the ingredients that had used from a supplier that we're out of date or had been labelled incorrectly then the original biltong company could prove that they had carried out all of the checks necessary to protect their customers and would be able to mitigate their liability.

- *With the checks that they carry out they can provide a full transplant provenance trail on their suppliers for their customers and regulators - from the source origin of the product to the supermarket shelf.*

When the new batch of meat and ingredients have arrived, they create an internal identifier on how to track this manufacturing batch run for the product this is recorded on an internal application.

Unique Identifier

This unique reference can be utilised by the evident proof platform to organise and streamline the building of the Evidence process Once this has been captured or created and then all data for a particular proof process can be related back to this for the relevant data proof collection process.

This a very powerful feature built into the evident proof platform. Later on, we will go into more detail about this principle and explain how this works.

1. **He then needs to prepare the product before for the drying process –** Video Description overview of The Cold Room and the monitoring process.

Product quality checks are carried out but before the product manufacturing process is started the food preparation area has to be checked to ensure that at health and safety regulations have been applied and the level of cleanliness and sanitation is compliant. Once the products have been checked for authenticity and quality controls have been applied, they then start the process of preparing meat with the correct spices and herbs or the drying process that is used to create the end product.

Question - what data during this part of the process and data workflow above do you think should form part of your data framework to be pushed to the evident proof platform.

Answer - quality control workflows and data verification would check and confirm the following: -

- *That the ingredients are at the level that they should be and are the correct - currently these are recorded third-party applications so this data can be pushed to the evident proof platform and in the event that there is an issue the company can legally show that it has carried out the correct process*
- *The cleaning roster workflow and data - confirms that the health and safety regulations have been met and the meat has been prepared in the correct environment.*

Example As a food producer, one of the best ways for the Original Biltong Company can meet its legal obligations and safeguard its brand is through their food safety standard pass. Collecting all of this data from the devices and connecting this through to the evident proof verification and proof platform would provide an audit trail to confirm that the product had been kept at the correct temperatures

2. **Monitor the production process -** Video Description Overview explaining the drying room process and the data flow

So, the next stage is making sure that the product is moved safely into the drying units where the manufacturing process begins. During this process, the meat needs to be constantly monitored to ensure that the temperature and humidity settings are correct in the drying unit and this is done through sensors they record all of the data including the humidity, Airflow and the temperature.

Question - what data during this part of the process and data workflow above do you think should form part of your data framework to be pushed to the evident proof platform.

Answer - We mentioned that during the monitoring and manufacturing process that data has to be collected through Iot devices all of this information could be pushed through to the evident proof platform so in the event that there is an issue with a product batch then Wayne can provide evidence a full audit trail to confirm that all the devices were operating correctly and that the temperatures were correct.

3. **Packaging and distribution of the product**

The product is then packed and sealed in airtight bags to maintain the freshness and stamped with a best by the date it is then distributed to retailers and end-user consumers this data is recorded to an internal application and the product is sent out either by post or delivered directly too retail Customers.

This information should also be recorded at the evident proof platform providing confirmation of the best buy dates and also the date that the product was dispatched the and to whom.

Pulling this all together as Legal Proof -

Building Data Bundles and Why is this important?

Earlier we reference that a unique identifier/reference could be used to pull together all of the data we are looking prove - we refer to this as data bundles - The evident proof platform uses this innovative new idea called proof seal bundles. These bundles are designed to pull together all information and data centred around a specific entity and workflow (whether this is a process an Event, transaction, or a document) in a model that is suitable to prove compliance for the client.

In our example, we are looking to tie together all of the data and contextual information around the Manufacturing batch production of the biltong product then push all of this data onto the evident proof platform so it can be stored in an immutable way. This way when a proof certificate is required, we can pull in any of the associated data that we may need.

In other examples, this unique reference could be the reference on a bicycle frame that had been manufactured then all of the other parts built around this could have the same unique reference number so when pulling all of this information together a Group relationship is created.

In this case, we have identified the following workflow and data activities in the food Manufacturing business model. See the table below lists the general workflows and data types as well as the drivers for proof and verification for a Manufacturing company.

Video Description - The Original Biltong Company Why data is so important overview and explanation

Video Description - The Original Biltong Company Provenance and traceability overview

General risk drivers and data workflows for the food production sector

Data Types & Workflow *Examples of activity data flow*	Risk Drivers Risks associated procedures & data handling	Legal & Compliance Regulations *Example Regulations Jurisdiction Specific*
Data - Documents*, Transactions, events* Product Data, Customer Data, Manufacturing Data, HEALTH & SAFETY CLEANING DATA, vendor Data, Supply Chain Data, R&D Data. **Information Workflows** Product OR Component Information, Research software tools, Product Design Development, , Testing, Food Production, Assembly, Feedback and Testing, Manufacturing controls Quality control data	**They need to Comply & adhere to:-** Environmental health, SALSA, BRC, Product safety liability, Product safety advice & enforcement, Product Industry-specific Health & Safety regulations, Ethical Policies, Hazard analysis and critical control points, or HACCP **Comply with sector-specific Legislation & Regulation** Such as - Food or perishable standards, the Financial Services Act, Health Care & Pharmaceuticals Act, Manufacturing Standards Act, Health & Safety Act	**Data Regulation -** GDPR, ISO 27001, Sarbanes-Oxley Act of 2002, **Food Production Regs –** Food trading standards, The General Product Safety Regulations 2005 (GPSR), Electrical Equipment Safety Regulations 2016, BSI, SALSA food accreditation.

Knowledge Check

In the following section we will ask some questions to help you confirm your understanding of why the original biltong company would require the evident verification and proof solution.

1. Who enforces the framework that the original biltong company need to adhere to and why?
    a. Industry standards are set by The Food Standards Agency Its main goal to protect public health in relation to food. It gives has the power to act in the consumer's interest at any stage in the food production and supply chain.
    b. These are the data processes that we are looking to be able to prove immutably to by storing them on the evident proof platform

2. Why would the original biltong company want to Track and record the providence of the products that it uses from its suppliers in a fully transparent way. Which of the following are true?
    a. If There is an issue with one of their products then they have a full immutable audit trail of all of the supplier's products
    b. They can immediately prove that they carried out all the required checks and balances on their supplier's products
    c. If for any reason the consumer made claim against the original biltong company this information could be presented as a proof offering full transparency and traceability.
    d. If the supply chain partner had tampered or change their copy of the product delivery and product data (such as product age and freshness) to hide any issues with the products that they had supplied, the proof certificate would immediately negate this challenge – by proving a complete audit trail of all product deliveries and dates etc
    e. Showing the full Providence chain of the original biltong products consumer trust and creates brand loyalty

All of the above are true

3. What would be the easiest way for the original biltong company to prove that it had carried out all of the cleaning and sanitization requirements correctly when the health inspector pays a visit.
    a. Go through all of the logs and records to show that everything had been carried out correctly pulling together all of the pieces of information from different sources - No
    b. Generate a proof certificate automatically pulling together all of the required proof to show that everything had been carried out and recorded correctly - yes
4. What is the role of the sensors that are used in the refrigeration unit and the drying process that the meat is required to go to during preparation?
    a. These types of sensors are called IoT sensors and are used to provide real-time monitoring of the product while it is stored within the refrigeration unit or the drying unit.
    b. They create notification alerts and triggers in the event that the refrigeration unit or drying unit stop to function correctly
    c. They are pre-set at certain levels to confirm that the storage and manufacturing process has been carried out correctly.

5. Why would the company want to use the evident proof platform to confirm this iot data?
    a. Confirming that all of this data has been immutably stored on evident proof in real-time would prove that all of the manufacturing standards required by The Food Standards Agency had been met.

b. Storing this on the evident proof platform would allow challenges to be quickly dealt with collating all the information and proof together allowing it to be cost effectively presented in a single proof certificate saving time and money