final report

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Evaluating Data Capture and Predictive Analytics for Managing the Carbon Footprint of the Red Meat Value Chain

Abstract

This pilot project set out to examine two hypotheses, firstly whether the Association of Supply Chain Management's SCOR™ model, with its SustainableSCOR application could be the globally accepted supply chain standard for analysing the red meat supply chain carbon footprint, and secondly whether process intelligence could provide a cost effective nationwide platform for this solution. Both hypotheses have been proven true and it recommended that a new project be established, bringing all the carbon neutral projects together using this global standard as the core and building the industry and subject matter expertise on this platform.

Executive summary

This report investigates the applicability of the Association of Supply Chain Management's SCOR™ model as well as its SustainableSCOR application as a standard for assessing the red meat supply chain carbon footprint.

Following design led thinking workshops with representatives of cattle properties and feedlots, the appropriate components of the SCOR™ model were extracted and an online Google Forms application was built. This allowed the stakeholders to experience how a fully functional platform would operate.

Functionality such as a questionnaire, carbon footprint calculator and a reporting dashboard were developed and tested with the stakeholders. Since the SCOR™ model also contains recommended best practices, functionality that provides a recommendation to the user on how improved carbon efficiency can be achieved was also developed and demonstrated.

The design and costing of a nation-wide solution was conducted utilising the process intelligence solution. This analysis shows that a cost-effective subscription model is feasible, and scalable according to property, feedlot or processor size.

Stakeholders representing both cattle properties and feedlots reviewed the online system and reported back that the approach was rigorous and met their requirements. The stakeholders recommended the continuation of this development under a more inclusive project that brings together the many carbon neutral projects currently underway.

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1   Background

In partnership with MLA Donor Company (MDC), Hitachi Consulting ran a pilot project under the Sustainability (on-farm) sub program, working with the red meat supply chain to identify activities to achieve carbon neutrality by 2030. The goal of the Sustainability (on and off-farm) program is that the Australian red meat industry is recognised as carbon neutral.

Hitachi Consulting has a hypothesis that the Association of Supply Chain Management's (ASCM) Supply Chain Operations Reference (SCOR™) model (www.ascm.org), (https://www.apics.org/apics-for-business/frameworks/scor) regarded as the world wide cross industry standard for supply chain, is a most appropriate standard on which to evaluate the current state of the red meat supply chain's carbon footprint. The ASCM Enterprise Certification, which is the industries first and only corporate supply chain designation that measures social responsibility, economic sustainability and ecological stewardship is considered the most relevant standard for the red meat supply chain. This program aims to empower organisations to reach goals, improve results, and be more competitive in today's global business world. This unique designation incorporates SCOR™ content and all certification bodies of knowledge (www.ascm.org/ascm-enterprise-certification-overview/?banner=ascm-enterprise).

Hitachi Consulting has a further hypothesis that the Process Intelligence (PI) platform which was used as a core for projects P.PSH.0815, P.PSH.0859 and P.PSH.1077 is the ideal platform to use for the deployment of a Data Capture and Predictive Analytics solution for managing the Carbon Footprint of the red meat supply chain, since PI is based on the SCOR™ framework and is structured to reference the framework.

In order to test these two hypotheses, Hitachi Consulting attended a review of the ASCM Enterprise Certification in Chicago. At this review it was validated that the ASCM Enterprise Certification was an appropriate framework for evaluating and managing the Carbon footprint of the red meat supply chain.

The SCOR™ model covers the entire supply chain, from suppliers' supplier to customers' customer. It describes the supply chain around six primary management processes: Plan, Source, Make, Deliver, Return and Enable as illustrated in Figure 1.
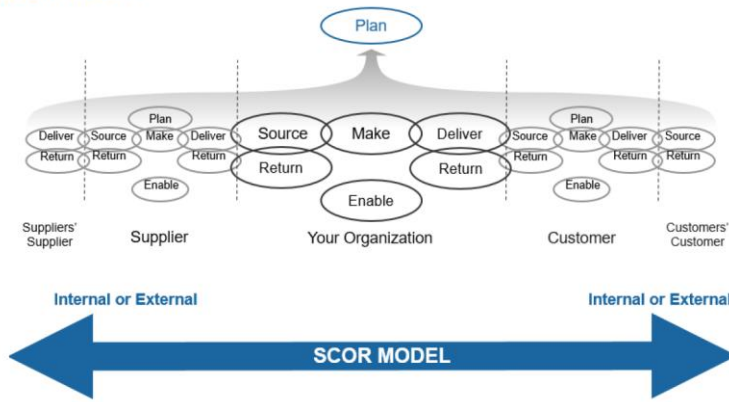
Figure 1: SCOR Model

For each of the management categories SCOR™ provides a process hierarchy defining processes at the major category level, detailed process category level as process element level(Figure 2).

Figure 2: SCOR Process Hierarchy

For each of the process categories SCOR™ defines:

Performance Measures – standard metrics to describe process performance and define strategic goals.

Practices- Management practices that produce significantly better process performance.

People – standard definitions for skills required to perform supply chain processes.

SCOR™ also has a recommended implementation methodology (Figure 3).

Figure 3: Racetrack

SustainableSCOR is a special application of SCOR. SustainableSCOR is based upon The Global Reporting Initiative's (GRI) Sustainability Reporting Standards (GRI Standards) that are within the scope of the SCOR model. The GRI Standards are designed to enhance the global comparability and quality of information on economic, environmental and social impacts of organisations, thereby creating greater transparency and accountability of organisations.   See https://www.globalreporting.org/standards.

Building on the above the ASCM has now developed the Enterprise Certification process (Figure 4).
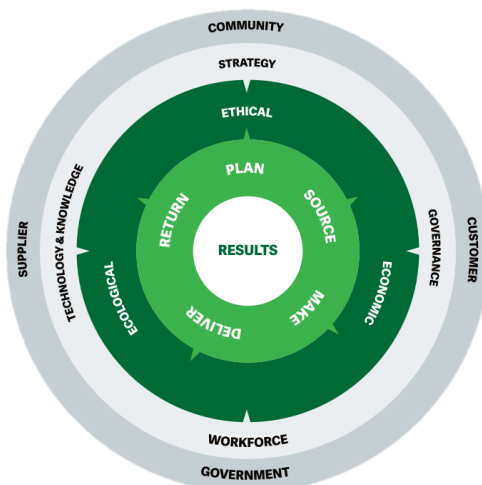

Figure 4: ASCM Enterprise

The ASCM Enterprise Certification framework consists of three pillars that represent specific aspects of an organization's supply chain: ethical, economic, and ecological. Each pillar contains key considerations within specified areas of supply chain processes, based on the SCOR model: plan, source, make, deliver, and return. Evaluations of an organization's

ethical supply chain practices include the review for anti-corruption and anti-trust, codes of conduct, confidentiality of information, human rights and labour practices, intellectual property and patents, and responsible marketing and sales engagement. Evaluations of an organization's economic supply chain practices include the review for business integrity and company reputation, board and corporate leadership, enterprise risk and crisis management, materiality index, responsible tax, supply chain strategy, and differentiated operating models. Evaluations of an organization's ecological supply chain practices include the review for circular economy, climate strategy, energy, water and waste, material usage, and product lifecycle stewardship.

For the purposes of this project only the ecological pillar is considered.

2 Project objectives

The core projective objective is to test the hypothesis that a) SCOR™ and the ASCM Enterprise Certification is an appropriate base standard for managing the carbon footprint of the red meat value chain and b) that Process Intelligence is the appropriate platform for the deployment of a Data Capture and Predictive Analytics solution for managing the Carbon Footprint of the red meat supply chain.

3 Methodology

The methodology consisted of three stages. In the first stage the SCOR™ model was configured to the red meat supply chain and the relevant processes, practices and performance measures of the SCOR™ model extracted. The second stage required the development of an online solution in order to validate the configured model with producers and other stakeholders along the red meat supply chain. Finally, a blueprint of the Process Intelligence solution was developed for the purposes of evaluating and costing a national deployment of this solution across the red meat supply chain.

3.1 Configuring the SCOR™ model for the red meat supply chain

The six management categories of the SCOR™ (see Figure 5) were assessed for relevance in managing the red meat carbon footprint.

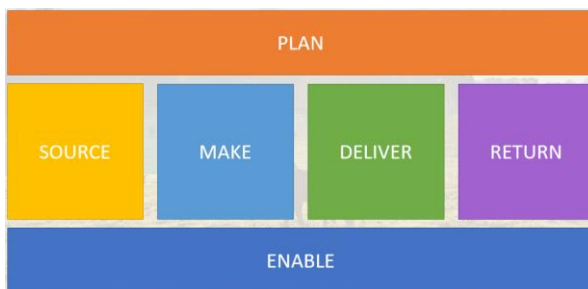*Figure 5: The Six Management Categories of the SCOR™ Model*

In the initial round of the design led thinking workshop consideration was given to removing the Return management process on the basis that it is less relevant. This consideration was subsequently overruled when producers pointed out that there can be a significant Return process which does lead to inefficiency, contributing to avoidable carbon

emissions. Examples cited were animals that are required to be transported back to a backgrounding property due to quality issues (e.g. incorrect weight for the feedlot process or a violation of a withholding period).

The producers recommended that all six management processes be retained in order to provide a comprehensive analysis of the red meat value chain.

The following SCOR™ practices were considered appropriate for the red meat supply chain carbon footprint solution:

#	Activity	ID
10	Source Non-Renewable Materials Used	SS.2.007
11	Make Non-Renewable Materials Used	SS.2.008
12	Deliver Non-Renewable Materials Used	SS.2.009
16	Source Renewable Materials Used	SS.2.004
17	Make Renewable Materials Used	SS.2.005
18	Deliver Renewable Materials Used	SS.2.006
22	Source % of Recycled Input Materials Used	SS.2.009
23	Make % of Recycled Input Materials Used SS.2.010	
24	Deliver % of Recycled Input Materials Used SS.2.011	
28	Source % of Products and their Packaging Materials Reclaimed SS.2.014	
29	Make % of Products and their Packaging Materials Reclaimed SS.2.015	
30	Deliver % of Products and their Packaging Materials Reclaimed SS.2.016	
40	Source Non-Renewable Energy Consumed SS.2.024	
41	Make Non-Renewable Energy Consumed SS.2.025	
42	Deliver Non-Renewable Energy Consumed SS.2.026	
46	Source Renewable Sourced Energy Consumed SS.2.029	
47	Make Renewable Sourced Energy Consumed SS.2.030	
48	Deliver Renewable Sourced Energy Consumed SS.2.031	
73	Source Direct (Scope 1) GHG Emissions SS.2.044	
76	Make (Production-related) Direct (Scope 1) GHG Emissions SS.2.045	
77	Deliver Direct (Scope 1) GHG Emissions SS.2.046	
81	Source Return Direct (Scope 1) GHG Emissions SS.3.010	
82	Deliver Return Direct (Scope 1) GHG Emissions SS.3.011	
90	Source Energy Indirect (Scope 2) GHG Emissions SS.2.049	

93 Make Energy Indirect (Scope 2) GHG Emissions
    SS.2.050
94 Deliver Energy Indirect (Scope 2) GHG Emissions
    SS.2.051
98 Source Return Energy Indirect (Scope 2) GHG Emissions
    SS.3.021
99 Deliver Return Energy Indirect (Scope 2) GHG Emissions
    SS.3.022
126 Source Emissions of ozone-depleting substances (ODS)
    SS.2.059
129 Make Emissions of ozone-depleting substances (ODS)
    SS.2.060
130 Deliver Emissions of ozone-depleting substances (ODS)
    SS.2.061
134 Source Return Emissions of ozone-depleting substances (ODS)
    SS.3.043
135 Deliver Return Emissions of ozone-depleting substances (ODS)
    SS.3.044
143 Source Nitrogen oxides, sulphur oxides, and other significant air emissions
    SS.2.064
146 Make Nitrogen oxides, sulphur oxides, and other significant air emissions
    SS.2.065
147 Deliver Nitrogen oxides, sulphur oxides, and other significant air emissions
    SS.2.066
151 Source Return Nitrogen oxides, sulphur oxides, and other significant air emissions
    SS.3.054
152 Deliver Return Nitrogen oxides, sulphur oxides, and other significant air emissions
    SS.3.055
162 Source Non-Hazardous Waste
    SS.2.074
163 Make Non-Hazardous Waste
    SS.2.075
164 Deliver Non-Hazardous Waste
    SS.2.076
168 Source Hazardous Waste
    SS.2.079
169 Make Hazardous Waste
    SS.2.080
170 Deliver Hazardous Waste
    SS.2.081

The above practices are all referenced in detail in the SCOR™ 12 model
(https://www.apics.org/apics-for-business/frameworks/scor)

3.2 Configuring the Red Meat Supply Chain Carbon footprint model for testing.

In order to test the configured SCOR™ model with producers and other supply chain stakeholders an online version of the model was created using Google Docs. This allowed the proposed functionality of model to be tested by producers and other supply chain

stakeholders prior to configuration on the Process Intelligence platform. The online model is shown below:

The complete online model is shown in the Appendix. Below is a summary of the structure and outputs of the model.

3.2.1   The Assessment Structure

The key design principles of the Assessment Structure are illustrated in Figures 6,7 and 8 below.
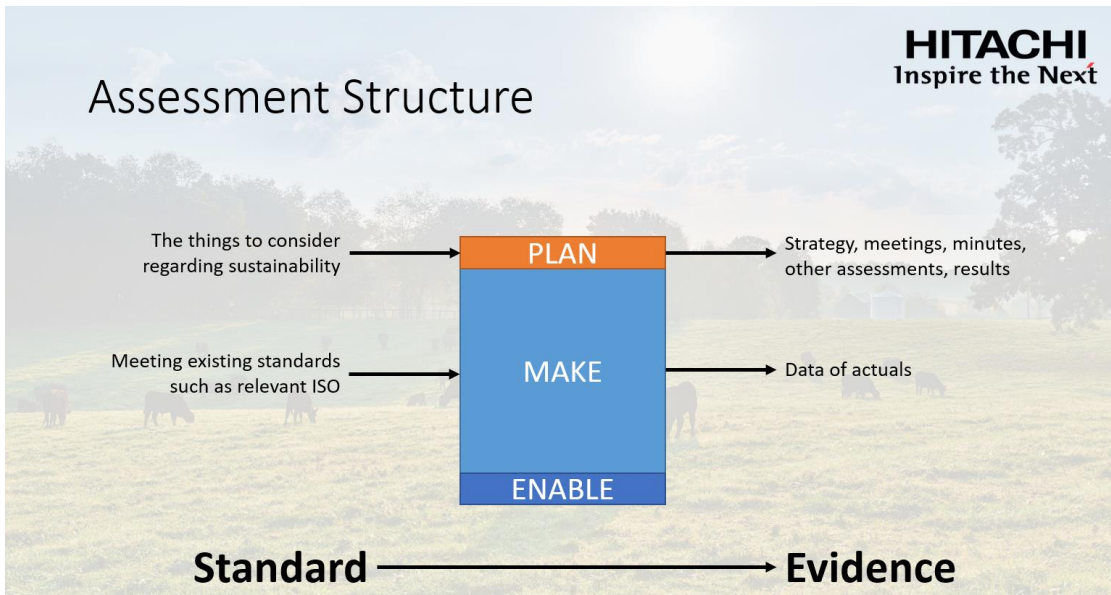
Figure 6: Assessment Structure Design Principle 1
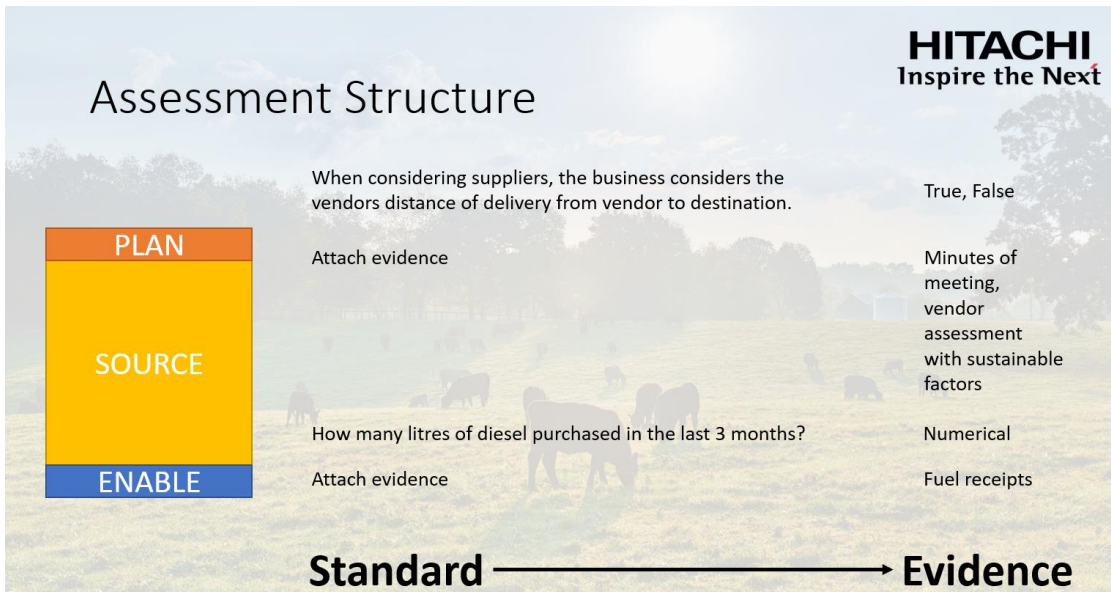
Figure 7: Assessment Structure Design Principle 2
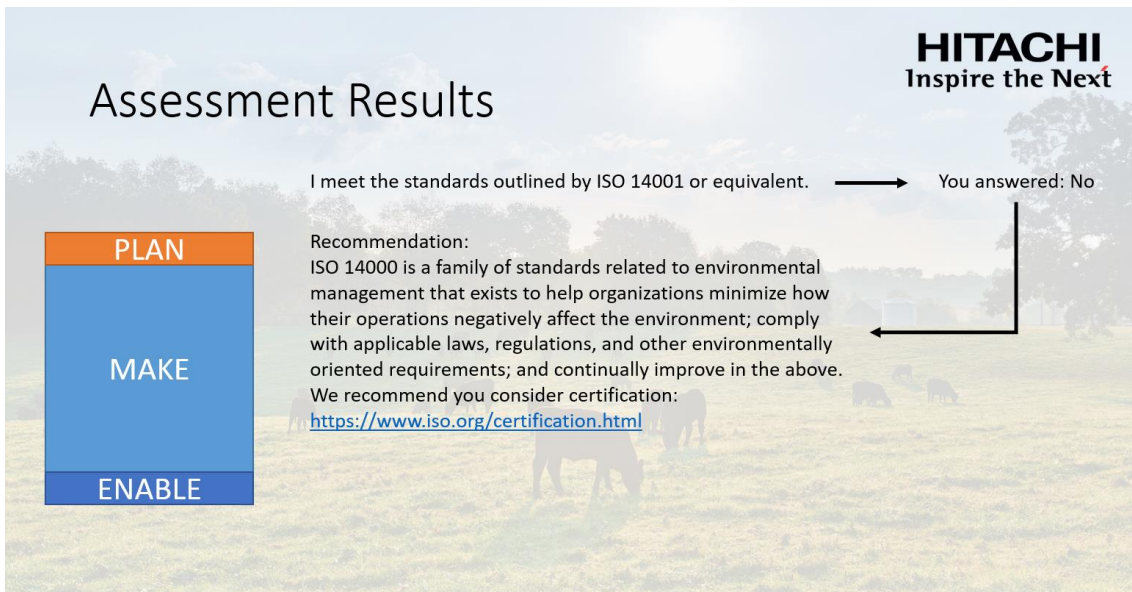
Figure 8: Assessment Structure Design Principle 3

The key design principles (Figure 8) are; 1) The Assessment is comprehensive covering the six management functions: Plan, Source, Make, Deliver, Return and Enable. 2) Evidence and proof are required to substantiate the answer to an assessment question which should also be quantified wherever possible. 3) Where the Assessment answer is NO, a recommendation on how to achieve a YES be provided to the producer or supply chain stakeholder. Having such a recommendation built into the solution will assist in the adoption of the solution.

3.2.2   Example of the Assessment

An example of the Assessment is provided in Figure 9 below. In order to view the full assessment, see the Appendix.
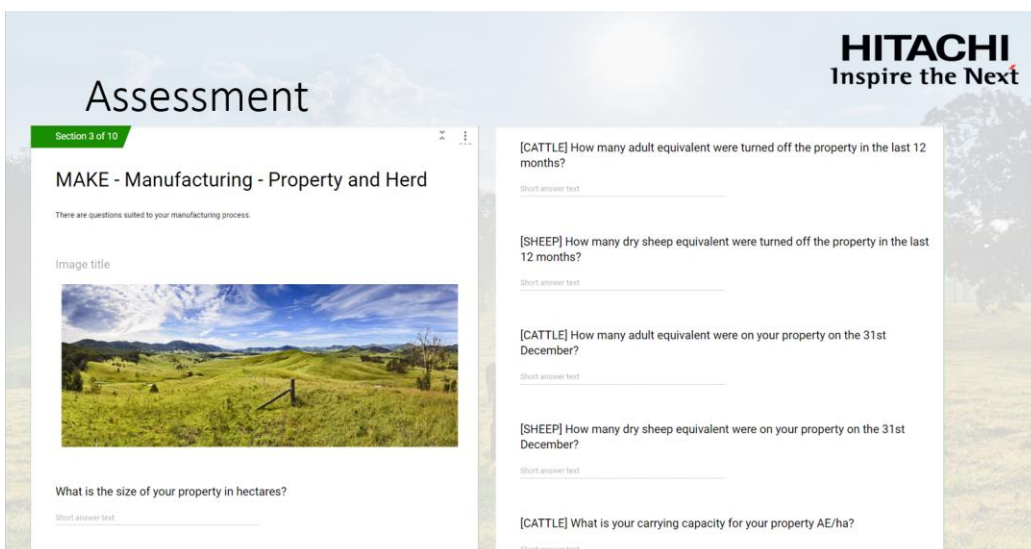
Figure 9: Example of the Assessment Questions

The Assessment calculates the carbon footprint of the farm, property, feedlot or processing facility based on the data supplied and provides an overall "net" carbon quantity as well as a summary of recommendations to improve the carbon footprint (Figure 10).
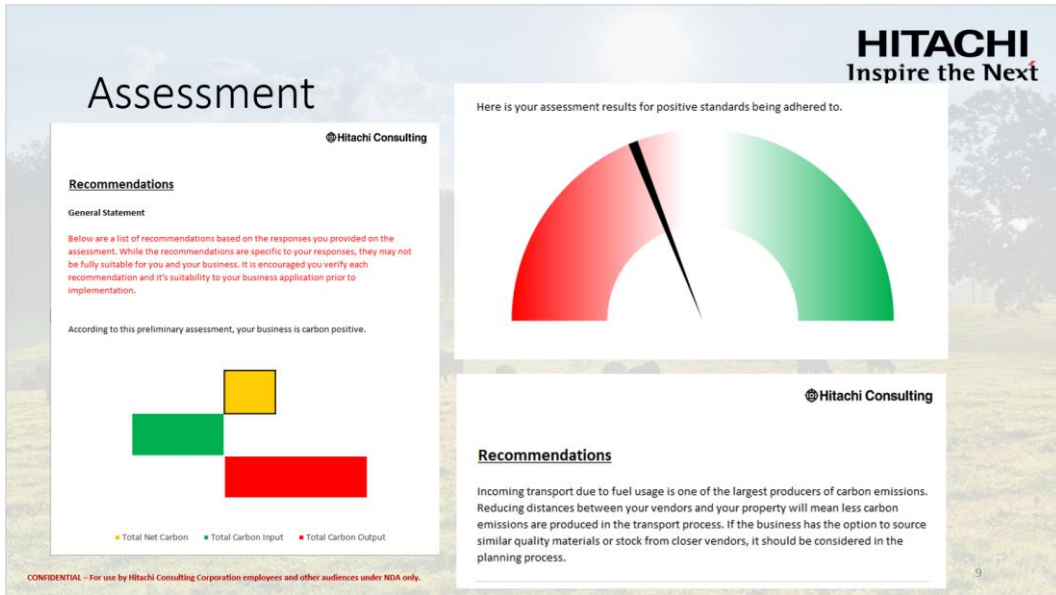
Figure 10: Assessment Report

3.3 Design of a platform to manage the Carbon Footprint assessment

The web-based solution which is designed on Google Forms was converted into a full platform design capable of managing the red meat carbon footprint across the entire industry (Figure 11).
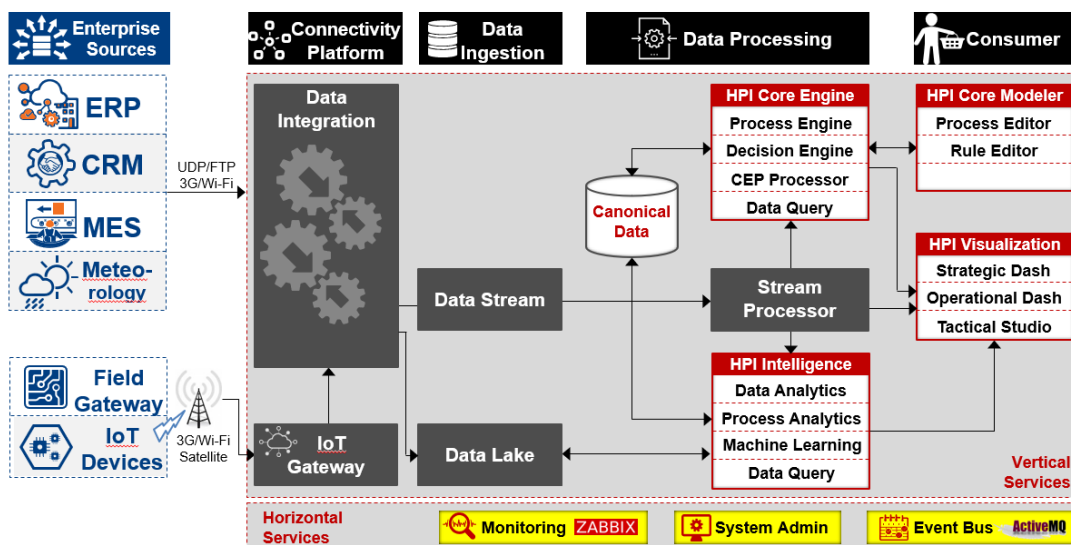
Figure 11: Design of a Process Intelligence Platform for monitoring the Carbon Footprint of the red meat supply chain.

4   Results

The above solution was tested by a producer as well as a feedlot operator. Both red meat supply chain stake holders were satisfied that the Assessment questions and Recommendations which were extracted off the base of the Association of Supply Chain Management's SCOR™ and SustainableSCOR™ models were appropriate to their operations. Both stakeholders endorsed the continued development of this solution.

An extract from the design led thinking workshop with the cattle producer is shown in Figure 12, while from the feedlot operator in Figure 13. While a small sample it interesting to note the proactive approach to introducing sustainable practices and sustainable energy into the respective operations.

| Questions	Response
What access to tools regarding environmental sustainability have you had access to?	BMP (Best Management Practices) - Retrospective Bill for all data. Prosecution for non conformance to land condition improvement. "Reef Bill" Match all capital - all value, natural capital and tracking.
In your view, what are the benefits of these systems?	anon information, benchmarking the industry - industry standards
In your view, what are the pitfalls of these systems?	subjective information, wasn't based on measures. Too much influence from government regulation
What are your top three activities for reducing your carbon footprint?	Ground cover - healthy grass growth (Stage 2, rotational grazing). Rotational Grazing, capture and recycle carbon. Vegetation management. Water retention, less runoff
Are you using renewable energy of any kind?	House, lawnmower, car electric, 20kw solar panels. 25-30 solar pumps, windmills (outgoing).
Do you measure carbon sequestration?	No (soil condition only)
In what ways do you measure carbon sequestration?	As above
How to you measure carbon sequestration; what are the results?	As above
	Ground Cover, soil carbon, water quality, tree/grass balance, grass under the trees,
Fertiliser	Nitrogen 15t in 10 years, 75000 acres

Figure 12: Extracts from the design led thinking workshop with the cattle producer

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Questions	Response
What access to tools regarding environmental sustainability have you had access to?	Solar farm renewable energy map
In your view, what are the benefits of these systems?	
In your view, what are the pitfalls of these systems?	
What are your top three activities for reducing your carbon footprint?	Solar farm, water recycling, effluent fertiliser
Are you using renewable energy of any kind?	Solar farm, kw generated (~471)
Do you measure carbon sequestration?	
In what ways do you measure carbon sequestration?	
How to you measure carbon sequestration; what are the results?	
Fertiliser	Yes - likely nitrogen-based
	Water recycling, metering, bills
	Controling grain, starting and finishing times

Figure 13: Extracts from the design led thinking workshop with the feedlot operator

A technical review of the process intelligence design has been conducted and concluded that a nationwide solution could be supported cost effectively using a subscription-based model with a sliding subscription based on the size of the properties, feedlots and processing plants along the supply chain.

5   Discussion

After the publication of the first two milestone reports, MLA and Hitachi Consulting decided to halt the project and not continue with milestone three which was to provide a dashboard on the process intelligence platform. The scope of milestone three was considered too narrow based on the results produced in milestones 1 and 2.

While the carbon footprint solution, based on the SCOR™ model and platformed on process intelligence is recommended as a solution there is also the rigorous external auditing process which the Association of Supply Chain Management offers through the ASCM Enterprise Certification program. This certification could be conducted at the MLA level – certifying the overall process as opposed to individual supply chains.

The ASCM Certification journey is documented in Figure 14..

The Association of Supply Chain Management, formerly known as APICS Supply Chain Council (APICS SCC) is a non-profit organization that advances supply chains through unbiased research, benchmarking and publications. APICS SCC maintains the **Supply Chain Reference model (SCOR)**, the supply chain management community's most widely accepted framework for evaluating and comparing supply chain activities and performance.

APICS SCC enables corporations, academic institutions and public sector organizations to address the ever-changing challenges of managing a global supply chain to elevate supply chain performance. APICS SCC is part of APICS, the premier professional association for supply chain management. APICS SCC, was formed through the 2014 merger between APICS and the Supply Chain Council.

The Enterprise Certification Journey

All organizations interested in becoming ASCM Enterprise-certified follow a similar path.* One approach to obtaining the ASCM Enterprise Certification is detailed below.

Supply Chain Self-Assessment (optional)
Any organization interested in pursuing the ASCM Enterprise Certification is encouraged (but not required) to complete a free supply chain self-assessment. The assessment provides insight on where your organization's processes fall in relation to the standards and to the industry at large.

Registration Preparation
For organizations interested in earning their ASCM Enterprise Certification, the standards provide an in-depth look at the certification evaluation criteria; the document checklist and upload template assist in the preparation for completing the ASCM Enterprise Certification registration.

Registration
Once you have concluded your preparation, you must complete and pay for your ASCM Enterprise Certification registration to begin the evaluation process.

Documentation Review and Onsite Evaluations
ASCM staff will then review your submitted information, assign your evaluator, and identify the sites to be evaluated. Your evaluator will work with you to conduct the onsite evaluation(s).

Certification
Upon completion of the evaluation(s), the Enterprise Committee will review the documentation and notes submitted. Once approved, the certification will be valid for three (3) years.

Annual Maintenance
In Year 2 and Year 3 of each certification cycle, certified organizations are required to submit an annual maintenance application verifying that operations are still compliant with the standards.

Recertification
After three years, certified organizations are required to recertify by submitting a new registration application, completing new evaluations, and seeking continued committee approval.

*The timeline above is meant to provide a quick snapshot of one common candidate journey. It does not reflect the finer details of the process as expanded upon in later sections of this document.

Figure 14: The ASCM Certification Journey

6 Conclusions/recommendations

The pilot project to investigate the SCOR™ model, its special application of SustainableSCOR, as well as the holistic approach and certification of the overarching ASCM Enterprise Certification Program has demonstrated that these are suitable in evaluating the red meat value chain. Hitachi Consulting Australia has deep expertise in the SCOR™ model and the Supply Chain Council, and are well equipped to support MLA in using these solutions for the management of the carbon footprint throughout the red meat supply chain.

The pilot project has allowed for the design of a platform that can support the deployment of this solution nationally. The platform will enable a cost-effective solution for all sizes of cattle operations along the red meat supply chain.

It is recommended that 1) a new project is established to build a comprehensive red meat supply chain carbon footprint solution based on the core SCOR™ model, enhanced by industry specific best practices as well as industry subject matter experts' and 2) the process intelligence platform be used for this solution since it is open source, open core, highly configurable with a process orchestration engine and the ability to automatically check processes for compliance.

7 Appendix

Sustainable Supply Chain
* Required

⊚Hitachi Consulting

Welcome

_____

Welcome to Hitachi Consulting's Sustainable Supply Chain assessment tool. The purpose of this tool is to give you an idea about the standards and practices that exist to assist you and your business to make better decisions when it comes to environmental management with a focus on carbon emissions. Given Meat & Livestock's Carbon Neutral 2030 goal, this tool will give a representation of total net carbon output and highlight some practices you can implement in your business to better manage carbon emissions.

To get the most out of the results of this assessment, we ask that you answer each question truthfully and to the best of your knowledge. The results will assist you in understanding the points of carbon emissions within your business, and give an idea where you stand against other participants.

To assist in the completion of the assessment, it will be beneficial to have some documents on hand such as:

Invoices from purchasing such as fuel, fertiliser, and electricity. Invoices from freight in receiving activities (goods shipped into the business).

Given you have access to the information required, we expect this assessment to take between 10 to 15 minutes.

Finally, we recommend completing this survey once per year to understand how meat and livestock businesses are adopting practices to managed carbon emissions.

Thank you for taking the time to complete this assessment. We wish your business success in the future!

About your business

Please complete some details about your business. These details are protected by our Privacy Policy and will not be available to others to view.

1. What is your name? *

_____

2. What is your business name? *

_____

3. What is your business address? *

_____

_____

_____

_____

4 What segments of the supply chain does your business operate? *

We recommend completing this assessment individually at the property level rather than the enterprise level. *Check all that apply.*

☐ Breeding

☐ Backgrounding

☐ Processing

SOURCE - Procurement

Data collection

From here, the data you enter will be de-identified and used to benchmark industry practices.

5. When considering suppliers, the business considers the vendors distance of delivery from vendor to destination. *Mark only one oval.*

◯ True

◯ False

.

6 Does the business reuse any packaging material that result from a procurement activity? *Mark only one oval.*

◯ Yes

◯ No

7. I source goods and product that make a sustainability claim on it's product packaging.
Mark only one oval.

◯ True

◯ False

8. According to your invoices for incoming freight, how many kilometers were traveled for the transport of livestock in the last 12 months?

_____

9. How many kilograms of nitrogen fertiliser did you purchase in the last 12 months?

_____

MAKE - Manufacturing - Property and Herd

There are questions suited to your manufacturing process.

10 What is the size of your property in hectares?

_____

11. [CATTLE] How many adult equivalent were turned off the property in the last 12 months?

_____

.

12. [SHEEP] How many dry sheep equivalent were turned off the property in the last 12 months?

_____

13. [CATTLE] How many adult equivalent were on your property on the 31st December?

_____

14. [SHEEP] How many dry sheep equivalent were on your property on the 31st December?

_____

15. [CATTLE] What is your carrying capacity for your property AE/ha?

_____

16. [SHEEP] What is your carrying capacity for your property DSE/ha?

_____

17 Does the business use feed supplements for the herd? *Mark only one oval.*

( ) Yes No

( )

18. Does the business use a nitrate supplement for the herd? *Mark only one oval.*

( ) Yes

( ) No

19. Does the business engage a specialist/consultant for use of supplements for the herd? *Mark only one oval.*

( ) Yes

( ) No

MAKE - Manufacturing - Byproducts

20. Does the business have byproducts of their primary product that result in the manufacturing/growing process? *Mark only one oval.*

( ) Yes

( ) No

.

21. How many by-products come from the primary product from a manufacturing/growing activity?

_____

22. Does the business reuse any packaging material that result from a manufacturing/growing activity? *Mark only one oval.*

( ) Yes

( ) No

MAKE - Manufacturing - Soil and Nutrients

23 Do you monitor soil condition? Eg. Land condition score *Mark only one oval.*

( ) Yes No

( )

24. What is the primary soil type on your property? *Mark only one oval.*

( ) Clay

( ) Clay Loam Loam

( ) Sandy Loam Sand

25. What is the secondary soil type on your property? *Mark only one oval.*

( ) Clay

( ) Clay Loam

( ) Loam

( ) Sandy Loam Sand

26. Does the business measure or monitor nitrogen levels? *Mark only one oval.*

( ) Yes No

( )

27. Do you use natural waste as fertiliser? *Mark only one oval.*

( ) Yes

( ) No

28 Do you measure soil carbon content / carbon sequestration? *Mark only one oval.*

.

   ( ) Yes

   ( ) No

29. Do you have a soil carbon baseline measurement? *Mark only one oval.*

   ( ) Yes

   ( ) No

30. What was the soil carbon baseline measurement (t/ha)?

_____

31. How many tonne/ha of carbon recorded on the assessment?

_____

32. Does the business use soil and/or leaf analysis to apply the correct application of fertiliser? *Mark only one oval.*

   ( ) Yes

   ( ) No

33. Does the business engage with a specialist/consultant for soil and/or leaf analysis to apply the correct application of fertiliser? *Mark only one oval.*

   ( ) Yes

   ( ) No

MAKE - Manufacturing - Energy

34. How many litres of diesel fuel did you purchase in the last 12 months?

_____

35 How many litres of petrol fuel did you purchase in the last 12 months?

_____

36. Does your business use renewable energy? *Mark only one oval.*

.

( ) Yes

( ) No

37. How many KWHs are generated with renewable energy?

Average per day. If the above question was 'No', please answer '0'.

_____

38. How many KWHs of energy did you pay for from an electricity provider?

Average per day. If the above question was 'No', please answer '0'.

_____

39. Does your energy provider generate KWs of energy from renewable sources?

Your energy provider will be able to provide you this information. *Mark only one oval.*

( ) Yes

( ) No

40. What percentage of KWs of energy are generated from renewable sources by your energy provider?

Your energy provider will be able to provide you this information. If the above question was 'No', please answer '0'.

_____

.

MAKE - Manufacturing - Irrigation

41. The irrigation and agricultural equipment my business uses that control the range of regulation and/or spray coverage pattern and/or flow rate. *Mark only one oval.*

( ) True

( ) False

42. Does your business measure soil moisture to optimise irrigation?

Mark only one oval.

( ) Yes

( ) No

43. Does the business have a way to monitor and manage water runoff?

Mark only one oval.

( ) Yes

( ) No

MAKE - Manufacturing - Waste

44. Do you offset carbon emissions by planting additional trees? *Mark only one oval.*

( ) Yes

( ) No

45. Does your business operations result in the direct or indirect production of non-hazardous waste?

Non-hazardous waste includes: *Mark only one oval.*

( ) Yes No

( ) 46.   Does your business operations result in the direct or indirect production of hazardous waste?

Hazardous waste includes: *Mark only one oval.*

( ) Yes

( ) No

MAKE - Manufacturing - Other

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47. My business makes a sustainability claim on it's product packaging. *Mark only one oval.*

◯ Yes

◯ No

DELIVER - Delivery

48. Does the business reuse any packaging material that result from a delivery activity? *Mark only one oval.*

◯ Yes

◯ No

49. Does your business export non-hazardous waste or products that could be classified as such, out of Australia?

Non-hazardous waste includes: *Mark only one oval.*

◯ Yes No

◯

50. Does your business export hazardous waste?

Hazardous waste includes: *Mark only one oval.*

Yes No

Thank you.