final report

Project code: P.PIP.0554

Prepared by: Nathan Barnett
                               Bindaree Beef Group Pty Ltd

Date published: 15 June 2018

Research and feasibility study into design and technical requirements for a value chain interactive platform

Abstract

The development of an interactive platform across the value chain presents an exciting technology transformation project designed to dynamically align processors with its producers, customers and consumers, whilst also becoming a fundamental enabling platform in shortening the supply chain with regard to communications and market signals. The build of the data warehouse is proving extremely valuable to the processor who have elected to continue the employment of this resource into the foreseeable future as a result. However the data warehouse has been identified as only one of the core building blocks required to deliver a successful interactive platform and as such, further work needs to be done to identify the best way forwards to acquire the other core building blocks.

Table of contents

1   Background

The development of an interactive platform across the value chain presents an exciting technology transformation project designed to dynamically align processors with its producers, customers and consumers, whilst also becoming a fundamental enabling platform in shortening the supply chain with regard to communications and market signals. This initiative has been designed to underpin relationships and value propositions throughout the entire value chain, resulting in a premium quality product specifically tailored to the needs of the value chain specific customers and consumers.

A continuous feedback and consumer insights would allow processors to understand and identify emerging trends whilst providing appropriate value offerings to market, and a cattle supply and forecasting mechanism, intended to bridge the gap between the processor and the producer by communicating the type of cattle the business requires to meet market needs in near and longer term periods.

2   Project objectives

The objectives for this project include:

- Understand interactive platform design consideration from both a technical feasibility and information sharing viewpoint across the value chain through the development of prototypes and customer discovery activity.
- Understand user requirements with regard to value chain information communication and feedback in light of technical solution across an integrated export value chain. Capture these learnings in project reporting.
- Validate the system requirements which have been identified as critical success factors in achieving the intended levels of adoption (suppliers, internal users, customers and consumers).
- Perform validation with a minimum viable product demonstrating the value offerings assumptions do actually meet the desires of target users.

3   Methodology

The methodology used to perform the interactive platform design (milestone 2) was as follows:

1. Perform research into how other industries use technology to engage customers, suppliers and their third parties from an information sharing viewpoint.
2. Perform specific platform research once platforms have been identified as meeting the technical requirements in point 1 above.
3. Engage internal and external market insights specialists to validate concepts and temperature test their validity in the market place prior to any significant investments being made.

4 Results

4.1 Interactive Platform Design Drawing
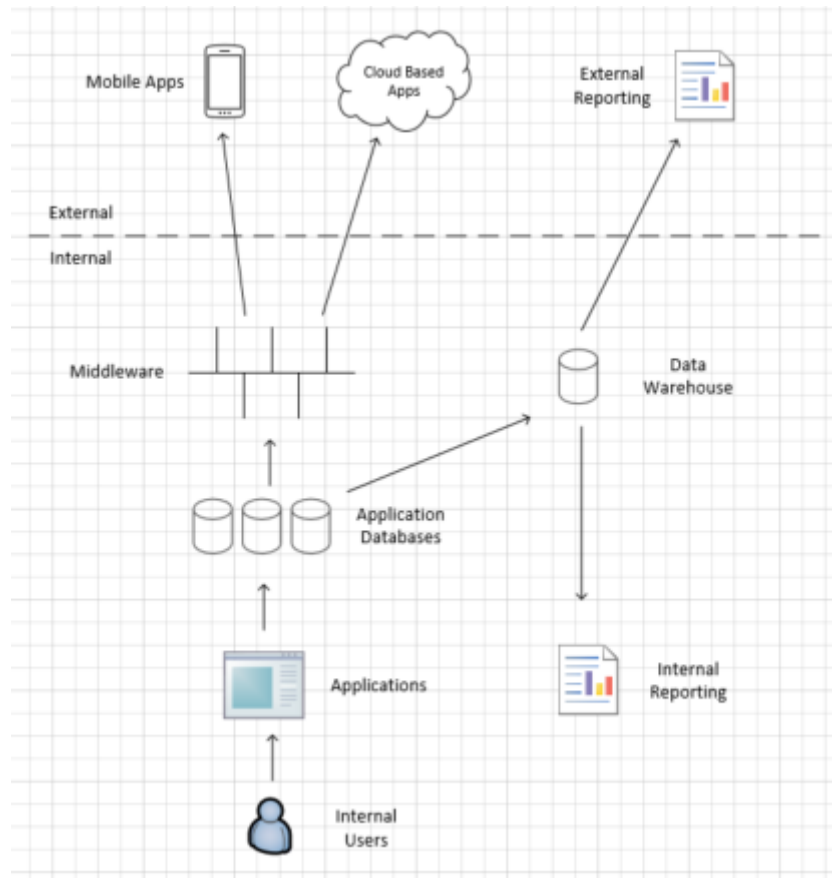
4.2 Interactive Platform Design Building Blocks Overview

The interactive system consists of a number of building blocks as seen in the diagram above. Each building block can be describes as follows:

- **Internal Users:** are employees of the business responsible for entering data into systems. These employees can exist anywhere along the supply chain and may consist of warehouse operators updating systems using hand scanners to track order packing status, through to salesman and customer service representatives adding account management details to a customers record.
- **Applications:** these are the software interfaces used by employees (or in some cases automated systems such as SCADA systems) where process information is captured. Typical systems include warehouse management systems, sales order systems, CRM tools etc.
- **Application Databases:** a database is where applications typically store their data. Many applications have the ability to run reports using their own data and they access this information via their internal databases.
- **Middleware:** many applications contain the same information within their databases so it is always a good idea to have a system that acts as the central source of truth for certain subsets of information. Examples of this information include customer names and contact

details, employee names, product sku's etc. A middleware system has the ability to replicate information from a source system to a destination system to ensure that data only needs to be input once, eliminating time from additional data entry as well as the potential for data entry errors.

- **Data Warehouse:** the role of a data warehouse is to move essential reporting data out of individual applications and into a centralised data store so that data from multiple source systems can be correlated with one another to create more comprehensive insights. The data warehouse becomes the source of truth for both internal and external reporting services and ensures data is consistent and has integrity.

- **Internal and External Reporting:** this is the presentation of data to employees, customers and partners. There can be a lot of information available within a data warehouse, and it is the job of the reporting layers to present this data in a concise and accurate format relevant to its audience.

- **Cloud Based and Mobile Apps:** these applications don't live on an organisations internal infrastructure, they are hosted on a vendors platform. This introduces a number of challenges in the context of an interactive platform because data still needs to be shared between internal systems and cloud based applications. This is typically achieved using a middleware application. Cloud based apps are typically presented using a website or mobile application and are highly available and very well developed/presented. For this reason, they are typically a very good candidate for customer and partner interaction.

5   Discussion

A lot of time has been spent on understanding supply chain interactive platform opportunities and how to bring these to life in a commercially viable way. The build of the data warehouse is proving extremely valuable to the business and BBG have elected to continue the employment of this resource into the foreseeable future as a result. However the data warehouse has been identified as only one of the core building blocks required to deliver a successful interactive platform and as such, further work needs to be done to identify the best way forwards to acquire the other core building blocks. Bindaree Beef has recently committed to the purchase of a middleware platform to ensure it can continue to progress the build of an interactive platform over the next few years.

6   Conclusions/recommendations

The work undertaken within this project has been invaluable in demonstrating the power of data to the Bindaree Executive and Management teams and has created a new pathway within the business to invest within this capability. The next phase of the project involves highlighting the operational efficiencies that can be gained and the data integrity benefits of using a middleware application. Once this has been completed, Bindaree Beef will have a high level of confidence in its data integrity and underlying operational processes and can then proceed to expose this to externally to customers and partners using an interactive platform.