Succeeding social media: Designing a future for Queensland industries online trade shows


Dissertation A & B

Kaylee Boccalatte – s0061882
October 2012

Supervisor: Dr Ashley Holmes
Certificate of authorship and originality of Dissertation (Declaration)

The research and discussion presented in this dissertation are the original work of the author and has not been submitted at any tertiary institute or University for any other award. Any material with has been presented by any person or institute is duly referenced, and a complete list of all references is presented in the bibliography.

Signed: Kaylee Boccalatte

Date: 26/10/12
Copyright Statement

This dissertation may be freely copied and distributed for private use and study, however, no part of this dissertation or the information contained therein may be included in or referred to in publication without prior written permission of the author and/or any reference fully acknowledged.

Signed: Kaylee Boccalatte

Date: 26/10/12
Abstract

Queensland business tradeshows and conferences accounted for approximately $151.7 million in income revenue during the last census and these events have arguably the greatest potential for growth within the Queensland events sector.¹ The research outlined within this paper proposes the development of an online application amalgamating social media and online trade shows to benefit Queensland industry leaders and consumers. A website entitled VITTO, has been conceived and designed to the level of non-functional prototype for submission in conjunction with this dissertation. It demonstrates a platform for potential buyers to source, browse, purchase and compare products and services from various online wholesalers and retailers within a single application. It is proposed that VITTO would utilise content management system principles and application programming interfaces to provide tools enabling unskilled users to create online identities, virtual booths and social communities suitable for connecting sellers with buyers in ways that stimulate networking, heightened engagement and customer loyalty. The incorporation of a conference centre within VITTO provides a platform for users to host and attend conferences, seminars, lectures, focus groups special events and training sessions. User engagement with the site is incentivised through a credit voucher system.

This dissertation provides a reflective account of the design considerations and the design process which utilises Activity Theory and Contextual Design principles. The prototype outcome applies social media principles to propose a user friendly and economical alternative to tradeshows for Queensland industry leaders.


Table of Contents

Abstract iii

1.0 Introduction 2

1.1 Research Questions 5
1.2 Dissertation Structure 6
1.3 Aim & Objective 7
1.4 Need for Research 7
1.5 Scope of research 8

2.0 Literature and Artefact Review 10

2.1 Introduction 10
2.2 Literature Review 10

2.2.1 Social Media 10
2.2.2 Building Online Communities 13
2.2.3 User & Interface Design 14

2.3 Artefact Review 18

2.3.1 Existing trade show sites 18
2.3.2 Virtual Vouchers 26
2.3.3 Third party applications 27

2.4 Conclusion 30

3.0 Methodology 31

3.1 Introduction 31

3.2 Stage 1: Mission Statement 34
3.3 Stage 2: User Modelling 35
3.4 Stage 3: Conceptual Modelling 36
3.5 Stage 4: Implementation design 37
3.6 Stage 5: Prototyping 37
3.7 Evaluation Method 38
3.8 Conclusion 39

4.0 Stage 1: The Mission Statement 40

4.1 Refining the primary design considerations arising from the mission statement 40
4.1.1 The Marketplace 40
4.1.2 Site Name 44
4.1.3 VITTO Corporate Visual Identity 44
List of tables and illustrations

Figure 1: *Unisfair* home page 20
Figure 2: *Prezi* home page 21
Figure 3: *Vue2010* Expo Hall 22
Figure 4: *Marketplace 365* Directory 23
Figure 5: *Business Global's* Lobby 24
Figure 6: *Unisfair* Networking Lounge 24
Figure 7: *3D Standards* Interface 29
Figure 8: 3D Booth 30
Figure 9: The definitive Activity Theory hierarchy of Leontiev 33
Figure 10: Old *VITTO* Logo 45
Figure 11: *VITTO* Logo Design 45
Figure 12: *VITTOS* symbol 47
Figure 13: *VITTOS* information 56
Figure 14: Profile information 57
Figure 15: Networking Information 57
Figure 16: Functional Diagram Logged In 58
Figure 17: Conference Centre home page 58
Figure 18: *Welcome* page 61
Figure 19: *Logged In* page 62
Figure 20: *Conference Centre* page 63
Figure 21: Prototyping Approach 64
Figure 22: Mind Map 70
Figure 23: Concept Map 72
Figure 24 Site Map 72
Figure 25: Wireframe Example 74
Figure 26: *VITTO's* Corporate Colours 80
Figure 27: Image Facing into Page 80
Figure 28: VITTO Page Heading 81
Figure 29: VITTOS and Networking Location on VITTO 81
Figure 30: About Page 86
Figure 31: Logged In Page 87
Figure 32: Mining Expo Preview 88
Figure 33: Manufacturing Expo Preview 88
Figure 34: Cattle Expo Preview 89
Figure 35: Agricultural Expo Preview 89
Figure 36: Exhibition Centre 91
Figure 37: Cattle Expo Page 92
Figure 38: Mining Expo Page 93
Figure 39: Agricultural Expo Page 94
Figure 40: Manufacturing Expo Page 95
Figure 41: Creating Booths Page 97
Figure 42: Booth sizes available 98
Figure 43: Conference Centre 99
Figure 44: Conference Tab 100
Figure 45: Seminar Tab 100
Figure 46: Lectures Tab 100
Figure 47: Focus Group Tab 100
Figure 48: Special Event Tab 100
Figure 49: Training Session Tab 101
Figure 50: Video Conference 102
Figure 51: Briefcase Page 103
Figure 52: Contacts Menu 104
Figure 53: Messages Menu 104
Figure 54: Saved Files Menu 105
Figure 55: Favourite Booths Menu 106
Figure 56: Favourites Menu 106
Figure 57: Avatar Creation Page 108
Figure 58: About VITTO Page 109
Figure 59: VITTO Horizontal Screen Example 110
Acknowledgment

I would like to thank Dr Ashley Holmes for his patience, constructive support and assistance throughout the planning and development of this project, in both the prototype and written component.

Thank you to the respondents of questionnaires completed though the term of study, the information gathered through these completed forms was generously provided.

I would also like to acknowledge CQUUniversity for providing me the opportunity to complete this Honours Degree.
Succeeding social media: Designing a future for Queensland industries online trade shows

1.0 Introduction

Social media is dominating the way information is created, sourced and utilised by society with the evolution of web based applications continually improving the ease of use and access for a range of demographics. Society today sees an emerging shift from traditional ‘bricks and mortar’ procurement outlets, toward online consumption, largely due to networking and the substantial benefits reaped by those adopting online procurement tactics. Yet as online consumption attracts more interest it has been recognised that virtual tradeshow formats are not being frequented by Queensland industry leaders. There are a number of companies offering a platform for online tradeshows however it is apparent these have failed to be embraced by buyers and sellers with several of the artefacts reviewed hosting a significantly small supplier listing. Analysis of existing sites in the Artefact Review section of this dissertation will highlight potential downfalls in their design, layout and navigational options.

The purpose of this project is to explore possibilities for an online tradeshow format and create a User Centred Design structure for the development of

---


Queensland industries tradeshows online. This honours level dissertation is comprised of two parts, a prototype artefact and a written component. The prototype, entitled *VITTO*, establishes the structure and design of a permanent online tradeshow. It provides large Queensland industries including *Mining*, *Manufacturing*, *Cattle* and *Agriculture* with a platform for easy and trouble free searching, browsing and advertising in addition to aiding product procurement. It is intended to provide Queensland industry leaders—wholesalers, manufacturers and retailers from various state-wide locations—with a dynamic platform for the autonomous development of trade networks by using social networking principles to encourage interaction for the purpose of negotiating trade and procurement.

The prototype incorporates several points of difference such as a 2D interface (as opposed to 3D representations used by some of the existing sites reviewed) and a booth metaphor, allowing people to conduct virtual tradeshows that parallel those held in actuality. The creation of booths is highly flexible with sellers having access to a large range of customisable features to better suit their corporate images and relevant industry. The site incorporates a conference centre which is available for a vast array of both public and private events inducing workshops, lectures and seminars. The most distinguishing factor is the incorporation of a localised virtual voucher system, *VITTOS*. *VITTOS* are incorporated into *VITTO* to encourage consumer loyalty by rewarding buyers for goal driven activity within site with discounts on purchases made through *VITTO* networks.

The written component of the dissertation documents research to support the *VITTO* concept development. Information and data supporting the design choices made throughout the development of the project is provided. Explanations are provided where appropriate as to why specific elements observed in existing similar
sites have been incorporated and why some have been discarded. The methodology which dictated the developmental stages and overall completion of this project is described. It comprised of a five-step procedure including researching existing online tradeshow formats and deciding on a design approach, design method and project scope. Also included in the methodology was an overview of evaluation methods which could be employed to evaluate design outcomes. This enabled the website to be iteratively developed from a concept into a 14-page graphically based prototype.

It will be shown how the designer reviewed the needs of intended users to determine the most effective method of fulfilling these while creating a scalable online community motivated by user-led principles including shared procurement goals.

This research applies existing techniques from the field of User Centred Design to the relatively new field of social media development. In doing so, new concepts and techniques are explored, contributing to applied knowledge. For example, new virtual collaborative and creative development tools are trialled with the efficiency outcomes reported.

The dissertation will employ the reflective practice approach devised by Donald Schón and described by Alexander as; “Creating [sic] a new framework of knowledge which values practice above head-knowledge, deals with tacit knowledge and skill in a helpful way, and which shows how reflection enables the practitioner to develop and extend the knowledge available to his [or her] profession.”3

---

1.1 Research Questions

This project began with the assertion that, given the increasing cultural acceptance of social mediation online, the emergent range of Web 2.0 software tools affording communication and transactions online, and the rapid rollout of high-speed broadband throughout regional Australia and Queensland in particular, surely there is a place in the contemporary marketplace for virtual tradeshows online that would compete with traditional place-based tradeshow events. There are various potential advantages of a virtual tradeshow, not least of which being huge cost savings and minimising the depleting resources that are consumed in shipping stock, merchandise and people around the country.

This resulted in the formation of the following fundamental research question:

1. What is a novel solution to developing an online tradeshow format for Queensland industries applying User Centred Design principles and contemporary social media technologies?

From this, the following questions arise:

a) What are the target audience motivations and actions with respect to procurement and how would these convert aesthetically to activities and functional operational requirements for an online tradeshow format?

   b) What type of informational and functional aspects can be observed in existing examples of sites with similar objectives and how could they be improved upon?
c) What is the appropriate method of introducing a virtual voucher system to motivate user engagement with the site and provide incentive for procurement activity?

d) What functional and interface tools would be needed to support project requirements?

e) What third party applications are available as plug-ins, mashups, and other partnerships to maximise utility and rationalise social media collaboration?

These became the design research objectives. However, there is a second strand to the research. This is to reflect on the design process itself. Questions that arise in this regard are:

- How useful are the User Centred Design principles in accomplishing design of innovative commercially attractive social media applications?
- Does the Activity Theory framework offer a useful way to analyse and plan for social media application?
- Are there new tools amongst emergent software that offer utility for aspects of creative development, particularly with respect to social media?

1.2 Dissertation Structure

The remainder of the dissertation is structured as follows:

Chapter 2: Literature and Artefact review – Presents the literature and artefacts that have contributed to the field of research and development of the project.

Chapter 3: Methodology – Defines the research method and approach to resolving research questions.
Chapter 4: Stage 1: The Mission Statement – Clearly defines the intended purpose of the prototype development.

Chapter 5: Stage 2: User Modelling – Identifies the target users and their informational, functional and usability requirements for online applications.

Chapter 6: Stage 3: Conceptual Modelling – Determines the functionality and tools necessary to support project requirements.

Chapter 7: Stage 4: Implementation Design – Designs the look and layout of the prototype to suit user requirements identified in previous stages.

Chapter 8: Stage 5: Prototyping – Provides an example of the final prototype.

Chapter 9: Explication of the Project - Explanation of the processes undertaken to achieving the outcome, explaining the prototype’s function and the user scenarios satisfied.

Chapter 10: Evaluation – Self-evaluation against the project objectives in accordance with the criteria stated in the methodology.

Chapter 11: Conclusion – Summarise the main contributions from this dissertation and suggest improvements and further research.

1.3 Aim & Objective

The primary objective of this dissertation is the development of a prototype for an online tradeshow format targeting large Queensland industries accompanied by a written component accounting for User Centred Design structure and social media principles that have informed the design development.

1.4 Need for Research

Queensland business tradeshows and conferences accounted for approximately $151.7 million in income revenue during the last censes.\(^4\) Australian mining alone spends ‘$6.8 billion annually on the purchase of goods and materials,’ therefore there is large market share potential available in this one sector, for the

suppliers listed within the proposed site. Upon evaluating a government issued review of Queensland events it was noted that there is no mention of online business events such as tradeshows occurring in this region. The reason for this exclusion is unknown although it could be attributed to these events being deficient in size or that this type of business event simply does not occur in Queensland. Business tradeshows therefore, have arguably the greatest potential for growth within the Queensland events sector.

1.5 Scope of research

This design project is confined in its scope to consider an appropriate online tradeshow solution for the State of Queensland, especially its regions. On this basis the key industries targeted are: Mining, Manufacturing, Cattle and more broadly, Agriculture. The demographic composition of these industries can range in size from large corporations to family operated farms or businesses, therefore the characteristics of this potential audience are diverse and varied. In the evaluative stages of the research, opinions were sought from representatives of these industries. In practice however, the resources available to the researcher were insufficient to provide statistically relevant feedback. These evaluative stages are documented in this dissertation as a demonstration of appropriate design evaluation practice.

The regional nature of the project has other geographically relevant implications. The researcher and author are studying individually in distance mode based in Rockhampton, which is a regional centre, but quite limited in terms of
access to resources normally associated with large urban capitals. There was considerable reliance on online research methods and virtual tools. In addition, concept development stages of the design process that might otherwise involve team-based collaborative procedures have been conducted in online workshops collaborating only with the research supervisor. Indeed, the author and her supervisor have never met face-to-face. The whole process has been undertaken ‘virtually’.

The VITTO prototype provides a design framework and visualisation for an online tradeshow. Thirteen pages of the prototype were fully conceptualised in order to demonstrate the design, content, layout, interface structure and navigational options present. Each page includes images and menu bars where necessary, in addition to all proposed interface components such as the virtual vouchers system and booths for the various tradeshow types. The prototype is developed with relatively standard software requiring no programming experience. As such the functionality of the site is not a consideration.

The written component of this project reflects upon and explains the experience of design practice as well as the reasons and processes behind the design choices made within the prototype.
2.0 Literature and Artefact Review

2.1 Introduction

This chapter reviews a selection of literature and artefacts which have contributed to answering the research questions stated in chapter one. The purpose of this chapter is to provide a theoretical background for the project and to contextualise the information design, social design, utility considerations and aesthetic approach to the development of the prototype.

2.2 Literature Review

2.2.1 Social Media

With the proliferation of websites it is becoming increasingly challenging for developers to not only attract users but to keep them on site.\(^9\) Social media is becoming crucially integrated into business practices focusing primarily on customer awareness, product positioning and branding.\(^10\) Incorporating social media elements into a commercial website increases user satisfaction by allowing interaction and content sharing in addition to the development of communities and collaborative projects.\(^11\) Social media is best experienced within environments of an unpredictable and autonomous nature, creating unbounded means for consumers to collaborate.\(^12\) Hinchcliffe states that with the dynamic and fast moving nature of social media it is


best for designers to provide a platform which encourages produsage but doesn’t preclude participation.\textsuperscript{13} Produsage is a growing trend stemming from the cultural shift toward social media applications which allow people to be both users and creators of online content, as seen in Wikipedia.\textsuperscript{14}

Bruns proposes several strategic recommendations for establishing, maintaining and growing a social media presence by premeditating and allowing for user wants and needs. These are;

- Modelling desired practices,
- Socialising users into the community,
- Seeding content development,
- Providing appropriate tool kits for content development,
- Enabling persistent user identities,
- Encouraging community self-moderation,
- Tracking community dynamics,
- Recognising community leaders,
- Dealing with content authorship and ownership.\textsuperscript{15}

There are many benefits to incorporating social media into websites for both users and sellers. Users are able to network, knowledge share, access free information as well as get peer reviews and opinions.\textsuperscript{16} For organisations the benefits include communicating with users, increased exposure, as well as the ability to

\textsuperscript{13} Ibid.


manage the company’s identity and reputation more directly. Social media allows companies to speak directly to staff, customers and competitors.

Dziadul identifies four potential shifts that social media may inflict on businesses including:

- A shift from companies trying to sell a product to making connections with the target market,
- A shift from companies switching from creating large advertising campaigns to smaller, yet highly effective tactics,
- A shift in business is from controlling a company’s image to being themselves,
- A shift for businesses is from being hard to reach to becoming available everywhere.

Social computing incorporates people directly interacting online such as exchanging messages, information and photos although it arguable that this term also includes activities that do not involve social interaction between people like bidding on eBay and editing Wikipedia.

There is a negative side to social media including criminal communication for the purposes of plotting violence, breach of privacy and user’s ability to share their critical thoughts with the world. These aspects will need to be monitored and minimised by VITTO in accordance with legislation and company policies.

17 Ibid.
18 Ibid.

Ross, “How Social Media and Online Networks can Benefit the Mining Industry,” 10.
2.2.2 Building Online Communities

Bahnish and Bruns identify the drivers of leading social media sites including the building and maintaining of collaborative communities, as pivotal factors in online success.22 Wenger, McDermott and Snyder summarise communities as “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis.”23

Communities can be built by providing a platform for users to connect through dialogue across large geographical distances for informational, interactive and engagement purposes.24 The incorporation of social networking tools provide the opportunity for individuals to contribute to building knowledge within the virtual environment.25 Different users inherently portray various values, skills and opinions which all need to be accounted for within an online environment as thriving virtual communities are reliant on each person mastering the structure and interactive tools necessary to facilitate collective intelligence.26

Three distinct types of online communities are identified including:

- “Consumption communities,
- Brand communities,

---


25 Ibid., 6-9.

26 Ibid.
Marketplace communities.”

Choi, Han, Qualls and Kim suggest that three inherent elements be implemented into a website to maximise autonomous development of virtual communities:

- “Infrastructure allowing user directed collaboration to occur,
- Infrastructure that fosters a sense of community and facilitates collaboration,
- Mechanisms to support mutually beneficial long term relationships.”

2.2.3 User & Interface Design

Technological advances in the multimedia field allow consumers to exert more control and choice over which media outlets they utilise. In order to captivate user interest many designers are pervading their website interfaces with flamboyant and attention grabbing elements often impeding the sites affordance and functionality.

---


28 Ibid., 12.


Therefore when website interfaces are obscure and complex users will generally forgo further use of the site.\textsuperscript{31} According to Deng and Poole, a user’s emotional response to a webpage’s visual components is directly linked to their behaviour and experience.\textsuperscript{32} Therefore in order for the prototype to be successful it is necessary that users immediately find the interface appealing and easy to use.

The physiological behaviours behind consumer intentions and attitudes can be explained briefly through the use of two research models which are: \textsuperscript{33}

- The Attitude Model – Details how the consumer attitude mediates the intention to shop online, \textsuperscript{34}
- The Behavioural Intention Model – Explains how an individual’s purchasing behaviour is affected by their attitude and perceived control over the transaction.\textsuperscript{35}

Bair-Early and Zender define several principles that will increase the effectiveness of an interface when implemented into a website’s design structure, these include:


\textsuperscript{34} Ibid.

\textsuperscript{35} Ibid.
• Obvious starting point,
• Obvious exit or stop,
• Internally consistent logic for content, actions and effects,
• Identify and consider the impact of familiar interface conventions,
• Tangible responses to apt user actions,
• Design landmarks as a reference for content,
• Elements in consistent proximity to their content objects and to each other,
• Interface that adapts or is adapted to use,
• Readily accessible overall mechanism for help,
• Interface elements that minimise interface and maximise content.36

They go on to provide general design principles which constitute good interface design including:

• “Make subject matter obvious from the start,
• Use visual forms apt to the content to embody the interface,
• Where content is obscure, new or narrative, use a visual metaphor.”37

There is no right or wrong way to design a website, just those that are more rational and those that better communicate what is able to be accomplished to users.38 A rational design process involves identifying the purpose and goals of a project prior to determining what tools are essential to achieving the desired result without prejudice for familiar and low cost tools which could potentially impede the final result.39 The most influential factors affecting the users perceived benefits of an online application are:

• Price,

---


37 Ibid.


• Convenience,
• Selection,
• Customer service,
• Trust,
• Security,
• Reliability,
• Ease and simplicity of use.\textsuperscript{40}

A vital process in the development of a User Centred Design structure is determining tasks users will complete on site, how they will perform the task and finally what tools are needed to allow the user to perform the task.\textsuperscript{41}

Sharp, Rogers and Preece anticipate user needs to identify and establish requirements for evaluating successful interaction on an application. These include:

• Functional requirements,
• Data requirements,
• Environmental requirements,
• User characteristics,
• Usability goals and experiences.\textsuperscript{42}

Sharp, Rogers and Preece state that several design principles must be incorporated into a successful interface including:

• Visibility – increasing the visible functions allowing users to know what they are able to do and where they can go,
• Feedback – allowing analogy of the user’s individual experiences,
• Constraints – showing users what options are available or restricted at any given moment,
• Consistency – Similar operations on each page,
• Affordance – ensuring that users know how to use all attributes within the object.\textsuperscript{43}

\textsuperscript{40} Delafrooz, Paim and Khatibi, "A Research Modelling to Understand Online Shopping Intention," 70-77.

\textsuperscript{41} Mcatee et al., "Designerly Tools," Sheffield Hallam University, 116/5.

\textsuperscript{42} Helen Sharp, Yvonne Rogers & Jenny Preece, \textit{Interaction Design}, 2\textsuperscript{nd} ed. (England: John Wiley & Sons Ltd, 2007), 478-479.

\textsuperscript{43} Ibid., 29-33.
"Designers commonly mimic standard interface design elements such as icons and metaphors, or create flashy interfaces that may appeal visually, but often at the expense of user understanding and functionality."\(^{44}\)

Spritz Web Solutions therefore propose that an effective website comprises of five separate elements; “an appealing and professional appearance, content with substance, full functionality, intuitive usability and search engine optimisation.”\(^{45}\)

Apis expands on these conclusions by adding that there are several ‘invisible’ factors that must be fulfilled in order for a website to be successful including good “architecture, graphic design and content production.”\(^{46}\)

2.3 Artefact Review

The approach taken to developing a successful prototype for an online tradeshow format for Queensland industries began with research to identify and evaluate:

- Existing tradeshow sites,
- Existing virtual voucher systems,
- Third party applications boasting features that could potentially be used to improve the functional and informational requirements of the proposed site for the target user audience.

2.3.1 Existing tradeshow sites

The artefact review analyses and evaluates existing online exhibitions and related sites to appraise function and determine how user needs are met in terms of

---

\(^{44}\) Blair-Early and Zender, "User Interface Design Principles for Interaction Design," 88.


the website’s design. Additionally, the content of a successful website must have substance that is both informative and relevant to the sites purpose and the target audience as well as provide all anticipated features and uniqueness to maintain user interest.\(^47\) According to Chan, the tools located in the main interface can dramatically influence the habits and behaviour of an entire community, therefore a good interface should pre-empt and allow for the various users’ operational, navigational and aesthetic needs while accounting for numerous levels of computer literacy.\(^48\) A robust interface design will provide a strong foundation for user satisfaction by fulfilling the need to interconnect, share and access incalculable sources of desired information instantly.\(^49\)

One of the sites reviewed upon commencement of the course was Unisfair. This company was acquired by Intercall in 2011 although upon reviewing of the newly renamed website, there are no notable changes to the functionality or layout of the website therefore for the purpose of accurately reviewing this virtual environment within the dissertation, this site which was examined will continue to be referred to as a sole artefact with its previous name, Unisfair.

Unisfair delivers a platform for connecting clients within virtual business environments for the purposes of marketing, recruitment, collaboration and

\(^{47}\) Robin Landa, *Graphic Design Solutions*, 3\(^{rd}\) ed. (USA: Thomson Delmar Learning, 2006), 328.

Spritz Web Solutions, “Does Your Website Have What It Takes?”


procurement. This website boasts a home page, illustrated in figure one, featuring a perspectival representation of an office foyer. There are six navigational menu options, however these are almost completely lost in the juxtaposition between two dimensional (2D) and three dimensional (3D) depth.

Conversely, the home page of Prezi, (shown in figure two) is a prime example of a clear, uncluttered, well-structured and user-intuitive navigational design. This home page, although unrelated to tradeshows, provides an example of a streamlined, satisfying and frustration-free experience. The concise use of headings, use of white space and harmonious colour pallet allows the site to stand out from the crowd.

Figure 1: Unisfair home page

Conversely, the home page of Prezi, (shown in figure two) is a prime example of a clear, uncluttered, well-structured and user-intuitive navigational design. This home page, although unrelated to tradeshows, provides an example of a streamlined, satisfying and frustration-free experience. The concise use of headings, use of white space and harmonious colour pallet allows the site to stand out from the crowd.

---


Ubivent and Business Global are built to reflect 3D models of buildings, rooms and people, presumably to coincide with the look and feel of real life trade shows. Although these interfaces are aesthetically attractive, using the program feels more like a gaming experience rather than an online website and the complexity of navigating the site detrimentally affects usability. It also takes a longer period of time to reach the desired location within the 3D interfaces than it would on a standard menu bar website which is unlikely to suit a busy professional looking to procure items quickly. Vue2010 provides an example of a clear and aesthetically attractive interface in figure three. The downfall with this Expo Hall would be that it would become increasingly difficult to browse supplier booths as their numbers increased due to its game-like appearance. The experience is not dissimilar to that of navigating an immersive 3D world such as Second Life. The Expo Hall within Vue2010 is comprised of several supplier booths on a single page that can only be

---


navigated by holding the mouse to the far right or left of the page which would be a largely time consuming experience when browsing through a large number of booths.

![Vue2010 Expo Hall](image)

Although the navigational structure of Vue2010’s Expo Hall could be more user intuitive, the menu items located on the bottom of the screen provide users with quick and easy access to the prominent areas of site. Spritz Web states that it is good practice to limit prominent local navigational menu options to 10 and position them in the side or top toolbars to increases the probability of user satisfaction by decreasing the time spent searching for information.\(^5^4\) Marketplace 365 provides an example of both good and bad design tactics on the home page shown in figure four.

Although Marketplace 365’s website provides a clean design, the interface inadvertently elicits negative responses from users due to overcrowding and limited affordance. The designer has grouped supplier listings into various fields such as art, banking and boating although have failed to inform the user as to which marketplaces and expos are actually running and which are under construction. This experience frustrates users as a significant amount of time can be spent wading through the available marketplace expos to find one that is active. In this example

\(^{54}\) Spritz Web Solutions, “Does Your Website Have What It Takes?”
the site would benefit from employing a cascading menu option, displaying the ‘under construction’ features ‘greyed out’ to inform users that these options are currently unavailable.

![Marketplace 365 Directory](image)

**Figure 4: Marketplace 365 Directory**

The headings within *Business Global’s Lobby* shown in figure five, display sheared titles resulting from the perspectival representation which impede readability. This again could be a negative side effect of incorporating a 3D interface. Borders states that all websites benefit from prominent, frontal headings allowing the user to scan web content quickly rather than read it.

---


Business Global, “Business Global – The International Virtual Exhibition Centre.”
Further issues are identified within *Unisfair’s* networking lounge shown in figure six, which fails to make effective use of the available space due to animated loops of 3D characters running in the background. These types of websites rely on users having a high speed internet connection, as dial up for example, would not effectively run these animations. Users living in remote locations will not always have access to high speed internet connections therefore they would benefit from designers limiting the forced animations and videos onsite.

It seems the designers of these sites listed above have concentrated on making the interfaces aesthetically pleasing, looking new age or high tech rather than providing a satisfying and user friendly on site experience to the audience. It is anticipated that the majority of targeted users will be working professionals ranging from casual employees to CEO’s and owner operators, all of which will likely have

---

57 Unisfair, “Unisfair - The Leader in Virtual Event Solutions for Engaging with Customers.”
limited time frames in which to complete allocated tasks. Therefore it is probable these users will intend to use the site purposefully rather than spend the time needed to navigate through game-like interfaces. Main navigational interfaces of the proposed site would benefit significantly from being designed around what users want and need, similarly to Prezi’s home page, rather than primarily focusing on the aesthetic appeal of simulated 3D experiences. These tend to confuse and conflate immersive experience and navigational intent. However, as will be described in chapter 2.3.3, the more immersive experience of 3D modelled interfaces could have application specifically for the representation of supplier booths.

The reason for this is that navigation to the booth should be as simple and straightforward as possible. However there may be benefit in designing the booths to approximate the look and atmosphere of a real life tradeshows. This would enable the inclusion of 3D models of products as well as video, images and text based illustrations or displays.

Each evaluated website requires users to register prior to accessing any aspect of the online environment. Borders and Hardin concur that forced registration in the exhibition environment will severely decrease any social media prospects and potentially cause the user to move on to another site.58 Hardin goes on to suggest that a balance between forced registration and establishing a relationship is the best practice for most online sites, similar to the method adopted within EBay.59 EBay gives users a large number of accessibility options relating to searching, gathering


59 Hardin, “Forced Registration: Pros and Cons.”

and storing information on site, although limits full functionality capabilities such as purchasing and networking, until registration is approved.\textsuperscript{60} This method increases the trustworthiness of the site by allowing users to ‘choose’ to register, based on their experience rather than be forced into it.\textsuperscript{61} The downside to this is that by allowing users to choose to register, it impedes the websites ability to compile a list of genuine ‘potential customer’ email address for targeted marketing tactics.

Each of the sites examined provide examples of booth designs in their demonstrations although all fail to provide the user with a snapshot of how registered suppliers are able to select, design or customise their online booth. Therefore very little is known about this process including the aesthetic options available, how and where the booths are selected, designed or customised as well as if specific elements within a booth are free or available at a cost or with a subscription.

\textbf{2.3.2 Virtual Vouchers}

\textit{Virtual Currency Platforms} summarised that virtual vouchers are used for the purpose of guaranteeing high quality traffic through a website and increase both leads generated and converted.\textsuperscript{62} There are several methods adopted for allowing users to earn virtual vouchers, including:

- Registering and referring friends,
- Participating in a survey,
- Purchasing from a network,

\textsuperscript{60} Ibid.

\textsuperscript{61} Hardin, “Forced Registration: Pros and Cons.”

• Earning vouchers – (not paying for them) by rating something, participating in an event or focus group.63

Virtual Currency Platforms offers advice for companies who have adopted virtual vouchers, including:

• Integrating the voucher system into the centre of the website - the more users see it the more likely they are to use it,

• Respecting the end users, ensure suppliers fulfil their duties to apply discounts are applied when necessary and deduct them accordingly,

• Ensuring the system be developed and maintained to be mutually beneficial to all users,

• Marketing the system directly to the target audience, letting them know how they can benefit from utilising the system,

• Converting leads by providing vouchers to those who continually encourage others to join the network,

• Keeping people engaged and loyal by rewarding repeat purchases.64

2.3.3 Third party applications

The collaborators have identified a third party application named 3D Standards which exhibits the required features for developing customisable booths

---


64 Ibid.

for online tradeshows.\textsuperscript{65} An example of the quality booths created within this program is located in the \textit{Exhibition Centre} discussed in chapter 9.3. If \textit{VITTO} becomes a fully functional program it is recommended that \textit{3D Standards} become a site partner where users will be directed to design and customise their supplier booths.

\textit{3D Standards} is a standalone application providing a platform for the development of 3D booths for virtual applications. The site provides modular and hybrid systems, furniture and other components such as lighting, flooring, banners and counters just to name a few. The interface is user intuitive with all graphical elements selected, dragged and dropped into their required location on screen, piece by piece to compose the desired look as shown in figure seven. This product is available on two different plans, Free and Pro although if \textit{VITTO} partners with this company an agreement would need to be made ensuring all \textit{VITTO} members have access to the Pro features, which significantly increase from the Free version and doesn’t contain the \textit{3D Standards} watermark. It is also possible to have additional features available for clients at a chargeable rate, for example a platform for real time video communication at the forefront of the supplier booth or a brochure stand that allows users to download the suppliers’ brochure. This will require further investigation though, as incorporating elements such as real time video communication would likely require an additional partner to be involved in \textit{VITTO} such as \textit{Vimeo} or \textit{Jabber}.

3D Standards meets most of VITTO’s requirements for supplier booth development, although currently the site does not provide booth size’s relative to the options available within VITTO. 3D Standards booths do not conform to a portrait type appearance and during the investigation of this program, it has not been possible to place items on top of each other. Currently the length and width of the booth are editable within 3D Standards although the height is not. In order for this program to provide sufficient options to the users of VITTO, the height of booths must be editable to ensure that users opting to create vertical booths are not disadvantaged.

An example of a site being developed within 3D Standards is shown below in figure eight.
2.4 Conclusion

The research contained within the literature and artefact reviews facilitated a theoretical and practical understanding of social media, communities, interface design and existing tradeshow applications necessary for the development of the user centred paradigm entitled VITTO. The literature reviewed came from a variety of online sources to provide a detailed theoretical understanding of how to incorporate effective social media tactics, online communities, user requirements and intuitive interface design in a website. The artefact review summarised the findings of exploratory research into the structure and features of similar sites, existing virtual voucher systems and third party applications, highlighting those that could be implemented or partnered with to maximise target user satisfaction.
3.0 Methodology

3.1 Introduction

The research methodology within this paper defines the framework for the development of an online application amalgamating social media and online trade shows to benefit Queensland industry leaders and consumers. The methodology is comprised of several components including design approach, design method and scope as well as the evaluation methods that will be employed to validate design outcomes.

Research was conducted into various theorems to gain an understanding into how psychology affects human behaviours when interacting with online applications. Two theories were identified to provide useful information including the Activity Theory and Contextual Design, both of which will be utilised for the implementation of the virtual currency loyalty program.

Various website development methodologies were addressed in order to formulate the final methodology for this project which results in a five step procedure enabling the proposed website to grow from a concept into a workable prototype. The prototype will be critically evaluated reiteratively throughout development and upon completion to ensure the final project meets target objectives and user requirements.

The design revolves around three main problems:

- Determine the target user group and typical users’ motivations and goals,
- Conceive how the site may be able to provide activities to satisfy those goals,
• Develop a representation successfully incorporating the results of the first two questions.

Various design approaches exist for instructing the preparation and development process of websites, although few provide a framework for gathering the psychological requirements of the target audience. The scholarly appraised Activity Theory provides a deeper understanding into how psychology affects human behaviours and decision making in a social and organisational context with tool mediation.66

Hasan and Crawford cite Soviet developmental psychologist, Alexei Leontiev when they explain (emphasis in the original):

**An activity** is comprised of sets of actions (towards specific goals) and **operations** (routine and well known habitual cognitive or behavioural processes, now commonly the domain of ICT systems). **Actions** are planned with specific goals and are not meaningful in themselves unless they are part of an activity.67

It is paramount that designers understand the fundamental steps a user would take to complete a goal-directed activity in order to understand how best to fulfil their needs.68 These needs can be fulfilled effectively by providing sufficient interface tools and menu options. Hasan and Crawford go on to cite Leontiev’s Activity Theory hierarchy (figure nine) which graphically depicts the mutually reliant interrelationships between users’ activity, action and operation as well as their motives, goals and conditions.69

---


68 Ibid.

69 Ibid.
Sharp, Rogers and Preece show the relationship between operations, human actions and activities in the Activity Theory diagram above by stating that “activities can be identified on the basis of the motives that elicit them, actions on the basis of conscious goals that guide them, and operations by the conditions necessary to attain the goals.”

In addition to Activity Theory, Contextual Design philosophy will be utilised throughout development of the prototype to create successful human-computer interactions within the site. The Contextual Design approach stems directly from understanding the target audience’s basic intents, desires and drivers prior to using them in the development of systems such as websites. This theory defines specific methods of gathering the requirements necessary for the development of a user centred application.

The growth of the VITTO website has been systematic, combining Action Theory and Contextual Design approaches with the method described below, to improve the chances of meeting user requirements with the website’s proposed utility and functional aesthetic.

---

70 Sharp, Rogers & Preece, Interaction Design, 400.


72 Ibid.
The methodology adapted for the purpose of *Succeeding social media with Queensland industry online tradeshows* includes the steps within the Contextual Design Process created by Holtzblatt and Beyer, the Activity Theory and De Troyer, demonstrated in the diagram located in appendix A.73

This hybrid of methods learned from various sources results in the five design approach stages of the website development:

- Project mission statement,
- User modelling,
- Conceptual modelling,
- Design implementation,
- Prototyping.74

In line with Schön’s reflective practice recommendations, each stage is also associated with a process of critical review, appraisal and review of the overall mission.75

### 3.2 Stage 1: Mission Statement

This prototype will demonstrate the capability to increase efficiencies within Queensland industries by providing an easily accessible online database of various wholesalers or retailers selling industrial products and services. Suppliers will be able to create a virtual store within which they will accurately catalogue the industry equipment they have for sale accompanied by images, videos and technical specifications for consumers to view.

73 Ibid, 3.

74 Ibid.

The design will utilise content management principles, customisable interfaces and a range of tools enabling relatively unskilled client users to create online identities, virtual stores and social communities. These will connect purveyors with buyers in ways that stimulate networking, heightened engagement and customer loyalty. The implementation of a virtual voucher system will be a unique feature within VITTO. This voucher system will be developed enabling consumers to receive discounts on products and services purchased as a result of networking within the site. This will be achieved through agreement with sellers as part of the registration process. The aim is to support continuing onsite interaction and encourage consumer loyalty. The introduction of vouchers could be similar to the alternative currency BerkShares, which were used to inspire members of the community to shop locally rather than purchase online or from companies in other towns. This prototype will focus on connecting those located solely within Queensland, although it will be developed with the potential to expand nationally, incorporating all Australian industry leaders.

3.3 Stage 2: User Modelling

Target Users

In order to develop a successful website it is necessary to identify and categorise the various demographics of the target audience anticipated to utilise the site and which onsite activities they will likely participate in. Therefore it is necessary to identify the informational, functional and usability requirements each

---


user group needs to successfully complete their tasks. The site design continued to evolve and change throughout the developmental process although the target user groups were identified during the initial stage of project development, these include:

- Buyers - Queensland Industry leader procurement agents,
- Sellers - Suppliers of Queensland Industry products and services,
- Generic Users – Both of the above.

### 3.4 Stage 3: Conceptual Modelling

This stage is ongoing throughout the project. Initially it involves analysing the information gathered during stage two to determine the sub-system functionality, properties and interface tools needed to support and enhance project requirements. This can be broken into two sections, object modelling and navigational design.

Object modelling involves identifying and expanding the site’s proposed subheadings, to determine what information the users will need within each section. For example, if the user’s Profile was a subheading, what information will need to be included within this section to satisfy their informational needs?

The navigational design then delimits all proposed subheadings of the site and brings them together in a single model to formulate an exploratory navigational structure. This structure will identify a hierarchy of main subheadings which are to be included as the various pages of the site. The results of the conceptualisation are reviewed at each stage to ensure that its logic remains consistent through changes in the various other stages of development and implementation.

---

78 Ibid, 4.
79 Ibid., 5.
3.5 Stage 4: Implementation design

The information and ideas generated during the completion of preceding steps are used as a foundation for designing the look and layout of each page within the proposed site.\textsuperscript{80} This stage involves designing a static interface illustration such as a wireframe. This begins with an outline of a basic design structure and is gradually modified to include elements such as corporate colours, logo, affordances, information and navigational features where necessary. Incorporation of all identified aspects of the site to date allows the collaborators sufficient means from which to evaluate, and subsequently re-structure if necessary, the look and layout. It is essential to revise the information gathered through the design approach to maximise the website’s information design prior to working on the aesthetic appeal and appraising that the look and feel is compliant with objectives and user requirements.

3.6 Stage 5: Prototyping

The information and guidance taken from the four previous stages listed above provided a strong foundation for the development of an interface which responds anthropomorphically to user intention, encouraging continued user involvement.

In line with the scope and limitations statement, the project is finalised with the production of a graphical prototype consisting of visualisations of key pages illustrating the incorporation of key utilities and an aesthetically designed interface. The development of a prototype allowed rigorous evaluation and validation against collaborators’ and end users’ judgements permitting continuous improvement and correlation with identified users’ needs. According to Brown, prototyping reduces

\textsuperscript{80} Ibid.
misinterpretation, confusion and the need to read through potentially 100s of pages of additional information when evaluating the design, making this form of communicating the design preferable to others such as wireframing.  

Adobe Muse was identified as the best software for the development of this prototype as it allows the building of fully functional clickable websites without the need to program and code. This program contains similar tools and features to those used within the designing software Adobe Illustrator and Photoshop which will be used for creating banners, graphics and editing images. Adobe Muse has the ability to provide evaluators with a clickable model, ideally providing an accurate representation of the graphical interface, navigational structure and page layouts.

3.7 Evaluation Method

The VITTO concept will be continually evaluated through professional reflection to encourage identification of obvious logical inconsistencies or other structural, process or conceptual flaws.

The prototype progression will be evaluated at three stages throughout the development process to ensure the final product contains the necessary design, functional, navigational and aesthetic elements appropriate to meeting the target audience’s needs and expectations as well as meeting the stated project objectives. VITTO will be evaluated by both the development team and external sample of persons who comply with the target audience sectors. User satisfaction with the product will likely be variable depending on their level of computer literacy, prior experience and understanding of product requirements and goals. Feedback from the evaluation will provide a tangible indication of user satisfaction in relation to:

---


• Conceived aesthetic quality of the product,
• Conceived anticipated utility of features,
• Conceived economic advantage from visualised features of product,
• Conception by user of product and the extent to which user was able to gain required information.

3.8 Conclusion

This chapter examined the research method and approach that will be used throughout the project to resolve the research questions. It employs a culmination of theorems including the Activity Theory and Contextual Design which provide effective methods for understanding the basic psychology of how a user’s behaviour, actions and motivations can be pre-empted and accounted for in online applications to create successful computer aided social interactions. The five step process stems from the initial development of a mission statement, user modelling, conceptual modelling, and implementation design to finally the development of a prototype. The systematic approach adopted in this methodology increases the opportunity for VITTO to meet stated objectives in developing a user-centred design structure for online tradeshows, targeted to Queensland industries. Evaluation methods established facilitate a sufficient validation of project outcomes incorporating collaborator and end user judgement.
4.0 Stage 1: The Mission Statement

4.1 Refining the primary design considerations arising from the mission statement

Further research, team-based brainstorming, and reflection resulted in refinements and drawing out of further design considerations from the initial mission statement.

4.1.1 The Marketplace

Queensland is a predominantly rural area comprising a vast mix of large industries including mining, manufacturing, agriculture and livestock farming that require a diverse range of equipment extending from large scale machinery to specialised tools.83 As part of standard procurement procedures it is usual for some company representatives to attend industry exhibitions and tradeshows held annually throughout Queensland for sourcing both products and suppliers.84 Decreasing attendance rates coupled with determinants such as the large time commitment needed and the associated costs, result in this form of sourcing becoming increasingly problematic for purchasers.85


The need for a socially satisfying, commercially attractive and economical alternative solution is conceived, where sellers are able to create an accurate portrayal of products and services along with images, videos and technical specifications online for consumers to view. This project proposes a model for online tradeshows connecting Queensland industry leaders, wholesalers, manufacturers and retailers from various state-wide locations to source and negotiate trade.

A small number of international companies have established online exhibitions in an attempt to reinvent and transcend the traditional retail trade shows including *Unisfair, MarketPlace 365* and *Business Global*. Although each of these, discussed in chapter two, have experienced varied amounts of success depending on their approach, it is fair to conclude the public is disinclined to embrace this form of procurement for a number of reasons.86 A review of existing online tradeshows assists in determining which features should be included within the prototype to fulfil user needs, enhance user satisfaction and increase the potential for successful long term human-computer interaction. The identified points of difference incorporated into the prototype are;

- Localised virtual voucher system: The use of tokens will maximise consumer loyalty and engagement of the buyer and seller in a method similar to existing loyalty programs such as

---


frequent flyer points which continuously reward customers for repeated use,

- Good structural design: A highly interactive, dynamic and customisable interface with pertinent navigational tools to pre-empt common operational, navigational and aesthetically attractive needs is beneficial.\(^{87}\) Actively encouraging produsage through the design structure allows users to actively contribute to the production and/or expansion of information onsite.\(^{88}\)

- Data collection methods: Statistics, tracking and analytic information such as traffic numbers, pages visited by users and conversion rates need to be readily available for the exhibitor in a downloadable format.\(^{89}\)

- Rating and Registration status: Large scale corporations may require a supplier to be registered within their database in addition to complying with a strict code of conduct.\(^{90}\) Therefore each exhibitor should have their registrations, affiliations, compliances and customer satisfaction ranking and status readily available,

- The purchasing of industrial products can be by any member of a company, ranging from high level procurement officers through to

---


\(^{89}\) Bowlby, “15 Key Elements All Top Web Sites Should Have.”

the workman using the product. Therefore the artefact should cater for all levels of computer literacy at all times,

- **Notifications:** Tenders are often required to be submitted to companies. A notification and online tender submission page within the site would benefit both buyers and sellers by increasing the competition for the buyers and increasing the number of opportunities for sellers. Additionally notification of sales, upcoming job needs and other important issues relevant to the registered user could be communicated immediately,

- **Preferences:** Allowing registered users to customise their home page to incorporate and interchange their frequently used items will likely encourage onsite usage. For example, a user may like to incorporate live news, *Facebook* or *LinkedIn* feeds as well as notifications, messages, to do lists or supplier updates on their home screen,

- **Appearance:** As described in chapter two, a number of tradeshow sites examined employed the use of a 3D interface, presumably to coincide with the look and feel of real life trade shows. It has been determined in chapter two that these types of interfaces increase the complexity of the navigational structure in turn negatively impacting usability. Therefore the *VITTO* main interface is designed as a 2D representation which seems more appropriate for the target user audience and medium on which the

---


92 Tor Pettersen & Partners, “Rio Tinto The way we buy,” 9.

93 Business Global, “Business Global – The International Virtual Exhibition Centre.”
website can be used. However the 3D modelled booth style, as provided by 3D Standards, would also be incorporated.

4.1.2 Site Name

A variety of name options resulted from brainstorming activities including VITO, Floss and BizFair. The names were evaluated in small focus groups to determine which best suited the projects needs by defining the professional industry tradeshow concept of the site. VITO was the collaborators first choice although upon checking this name against the Australian Securities and Investment Commission Register (ASIC) it was discovered this was an unavailable business name.94 Subsequently the title was adjusted to VITTO, a business name available at the time, standing for Virtual Industry Timeless Tradeshows Online.

4.1.3 VITTO Corporate Visual Identity

The VITTO logo was designed to be easily recognisable with the use of colours, font and image giving the logo a modern appeal. The circular image behind the “V” is designed to represent a light gold coin – symbolising the virtual voucher aspect of VITTO. The colours for this logo were chosen due to the bold and ‘new age’ combination giving an aesthetically attractive, yet highly contrasting appearance. The tones selected reinforce an interesting and modern appeal and will be translated into the look and feel of the overall site. The logo underwent several improvements during its conceptualisation. Originally the logo was created with the VITTOS symbol separate to the name VITTO and a longer unique selling position (USP) as shown below in figure 10.

---

Following a review, the collaborators agreed that substituting the logo for the first letter in the title was more aesthetically appealing and better symbolised the importance of the virtual voucher system, *VITTOS* within the site. By shortening and simplifying the USP to state ‘tradeshows online,’ a larger user base may be encouraged to investigate the site, rather than just those involved in large industry. The final logo developed is shown below in figure 11.

4.4 Site Affordances

The success of human computer interaction can be measured by the inter-relationship between the purpose for which the site is built and the available operations present, including the tools and content that allows socially creative processes to occur. By evaluating the features needed to make the prototype a success including user and system requirements, it is possible to identify what tools are required.

During the review of possible affordances and utilities, further refinements to the concept were considered.

---


96 Ibid.
• This artefact will provide business practitioners with a dynamic platform for the autonomous development of virtual trade networks by using social networking principles to encourage interaction for the purpose of procurement and networking. The application will be a significant step towards designing a future for social media and modernising tradeshows for Queensland industry leaders.

• Within the original scope of the project, VITTO was intended to allow purchasing and the transfer of funds through the site as a point of difference. Due to the inherent complexity of a payment facility collecting money from buyer and redistributing it to the relevant suppliers, this feature was discarded.

• Many companies including Rio Tinto, employ automatically generated procurement tactics, initiated when inventory levels reach a predetermined level. The program was to incorporate a feature allowing the uploading of buyer generated purchase orders through VITTO directly to the specified seller. The artefact was to be compatible with a vast range of file formats to ensure ease of use for these users. As detailed in chapter 9.2, during a review of the site the collaborators decided against incorporating purchasing online due to it being outside the scope of the project and its complexity. VITTO will be utilised to connect buyers with sellers though will not facilitate general day to day business tasks such as receive purchase or sales orders.

97 Tor Pettersen & Partners, “Rio Tinto The way we buy,” 9.
4.5 Virtual Voucher System – VITTOS

The virtual voucher system had been included in the mission statement because it is such an important point of difference for the VITTO site compared to existing competitors. The concept underwent progressive refinement throughout the developmental process to determine how and where users would be able to earn and spend VITTOS as well as their contrived value.

4.5.1 What are VITTOS?

VITTOS (vts) are a virtual voucher system within VITTO used with the intention of maximising consumer devotion in a method similar to existing loyalty programs, such as frequent flyer points. They are represented on VITTO with a circular, coin like symbol surrounding the letter ‘V’ as shown in figure 12:

![VITTOS symbol](image)

Figure 12: VITTOS symbol

VITTOS are used as a mechanism to support and encourage mutually beneficial relationships between buyers and suppliers, an exegetical element in creating successful online communities.  

A full explication of the VITTO system is provided at appendix F.

4.6 Conclusion

The mission statement builds the preliminary aspects of the site by establishing the purpose, target audience, affordances and a loyalty system. Aesthetic appeal has a great influence to the overall effectiveness of a website therefore it was necessary to develop the site’s corporate identity including the VITTO logo, USP and

---

VITTOS symbol as well as establish the corporate colours which will be applied consistently throughout the final product. Ensuring the user has sufficient tools on site to complete all desired tasks is vital to the success of a website therefore it was necessary to begin considering the preliminary affordances and key features of the paradigm including the virtual voucher system.
5.0 Stage 2: User Modelling

A vital process in the development of a User Centred Design structure is determining tasks users will complete on site, how they will perform the task and finally what tools enable the completion of the task. This research will examine and discuss the User Centred Design approach taken to facilitate collective intelligence and networking on the proposed site.

The elements located on the website interface must be directed towards meeting the needs of the target audience and incorporate the informational, functional and usability requirements necessary to perform all onsite tasks. The target audience must therefore be identified and separated into corresponding subcategories to allow the thorough examining of each group’s needs. In order to do this the target audience has been categorised into the following groups: buyers, sellers and generic users.

5.1 Buyers

Buyers will primarily use the site to inquire about products, research products, network with sellers and leave feedback. Users will have access twenty-four hours a day, seven days a week to browse through listed suppliers’ available products and initiate contact with the supplier through one of many available communication options. The ease of access, functionality and vast source of sellers available in the centralised location will increase productivity and minimise the unnecessary labour and expenses involved in sourcing products and relevant

---

99 Mcatee et al., "Designerly Tools," Sheffield Hallam University, 116/5.
information. Users can interact with companies directly to ask specific questions, request quotes or tenders at their discretion by contacting the company through chats, video conferences, group meetings or document transfers. In addition, each user will have the opportunity to publically rate several aspects of the company’s service and product quality upon conversing and purchasing (off site) which will substitute the strongest form of brand recommendation, traditional word of mouth referrals.

Requirements for buyers, information on:

- The tradeshow,
- About VITTO,
- Registration— including log in ID and password,
- Virtual voucher system,
- Listing of companies and information about the products and services offered,
- Policies of website,
- Site maps,
- Help,
- Platform for public and private events, such as conferences and seminars.

Functional requirements for buyers:

---


101 Ibid.

• Register for tradeshow/conference centre event,
• Attend tradeshow/conference centre event,
• Network with supplier,
• Suggest improvements,
• Email list for specials, new products,
• Search function,
• Simplified system of categories,
• Virtual salesperson,
• Visual and audio information system,
• Information of registration and affiliation status,
• Tender notification and submission process,
• Multiuser access allowing various members of a company to shop in store,
• How to utilise the features of the site to streamline their procurement processes,
• Negotiate and initiate supply and purchase arrangements - obtain quotations.

5.2 Sellers

Sellers will primarily use this site for the creation of their online store and generating networks which will lead to quotations which may be delivered within the site, at which point VITTOS related discount would be applied and to subsequent offsite sales and referrals. The integration of companies into social media ensures their availability to a large number of potential customers, providing direct communication channels between buyers and sellers essentially getting them in the
same (virtual) room. This website will have the ability to transform the way industry leaders organise and manage their procurement process with the service offered making (Interstate) geographical location irrelevant and providing maximum opportunity for lead generation. The adaption of a multi-user platform incorporating webcasting and live streaming technology available within the site, will reinforce consumer belief that the company is immersing itself into the forefront of technology.

By joining this site, businesses will potentially gain significant value in identity and reputation as well increase their networking and knowledge base. The site will have a range of designs available for the supplier’s virtual booth, allowing each company to customise or choose a stock store to suit their needs, by simply utilising a partner application. All the seller will have to do is supply content and determine how they want their store to look and feel prior to adding in aspects of their corporate identity. Features incorporated within the site will promote interaction and build relationships between buyers and sellers providing registered companies with a platform for dialogue with consumers.

**Requirements for sellers, information on:**

- The tradeshow,
- Registration – including log in ID and password,

---


105 Ross, “How Social Media and Online Networks can Benefit the Mining Industry,” 10.

• Benefits of registering with *VITTO* - Success stories of suppliers on site,
• Site architecture,
• Participating companies,
• How to utilise the features of the site to maximise their selling potential,
• Virtual voucher system

**Functional requirements sellers:**

• Register for tradeshow,
• Be approved for virtual online booth,
• Provide information about company,
• Provide information, audio visual, video conferencing, virtual real time forums on products and services,
• Create online booth,
• Make available the company’s logo, URL and other information,
• Multiuser access allowing various members of a company to sell through the online store,
• Ability to receive and respond to inquiries via multiple modes.

**5.3 Generic Users**

All users will have the opportunity to browse listings although they will be unable to contact sellers until registered. Each registered user will have the ability to create a profile, purchase items and participate in the sites’ marketing campaign. Upon registering online free of charge, users will be supplied with a username and
password in order to log on each time they need to use the service. It is anticipated that companies will employ a number of procurement or sales officers therefore both buyers and sellers will have the added benefit of allocating a number of users to their account, each with private log in details. Each user will have the ability to create a personalised profile and adopt an avatar, upload an image or company logo as a profile picture and establish a virtual briefcase where contacts will be stored allowing the communication channels to stay open.

The navigational structure, aesthetically attractive design, and ethical provisions will play a vital role in the development of this site to encourage and support the collective behaviours of users. Registered companies will be categorised relevant to their industry and segmented searches will be available for reaching an intended product, service or company efficiently. When a user finds several products of interest, the compare feature can be utilised allowing the comparison of product specifications, images and price. All users will have the convenience of storing a range of gathered documentation including products and information of interest, transcripts of online (within site) communication, brochures and online business cards within their personal virtual briefcase. The strength of security surrounding the exchange of private information online and users’ accounts will be at the discretion of each account holder who will have full administrative controls over their accounts privacy permissions.

Requirements for generic users, information on:

- General information about products, services and suppliers.

Functional requirements generic users:

- Navigating through products, services and suppliers,
- Social media functions such as chat, message board, forums and trustworthiness icon,
- Briefcase,
- Address book,
- Log in details,
- Avatar creation,
- Online business cards.

5.4 Conclusion

The characteristics of a website including content, tools and features were determined by categorising the target audience into three separate groups; buyers, sellers and generic users. From these categories it was possible to determine the specific functional and information requirements of each group, providing the designer with a list of elements that should be incorporated into the site to maximise user’s satisfaction. This process of pre-empting user requirements also allowed the collaborators to begin structuring the VITTO concept and determine how the elements could be operationalised on site.
6.0 Stage 3: Conceptual Modelling

The information gathered and explicated within the user modelling stage provides the foundation for developing necessary sub system functionality, properties and interface tools to support on site work practices. Although conceptual modelling of the paradigm is ongoing throughout project development the incorporation of the informational needs of each user group into one centralised location will provide design direction. This stage can be broken into two sections, object modelling and navigational design.

The information congregated in to the object models during this process isn’t intended to be detailed; rather it provides an outline of the information required within the various ‘pages’ of the site. This object modelling process was completed for several aspects of the site including the virtual voucher system VITTOS, the users Profile and the Networking structure which are shown below in figures 13 to 15.

![Figure 13: VITTOS information](image)
Figure 14: Profile information

Profile

Personal Details
* First & Surname
* User name
* Gender
* Address
* Email
* Password
* Phone

Avatar (choose or upload)

Business Card (create or upload)

Company Information (if relevant)
* Number of users & names
* Company Name
* Address
* Phone
* Industry
* URL
* Company delivery area

Account Settings
* Single or Corporate user access
* Are they buyer, seller or both
* Add/delete/modify users attached to account
* Individual user accessibility options
* Registration & Affiliation status (for chemical purchase and sales etc)

Figure 15: Networking Information

Networking

Acquaintances
* Search / Add
* Invitations
* Who is online
  * Connect via social media (Facebook etc)

Public Forums
Private Chat
Seminars
Lectures
Focus Groups
  * Prototype & Test new products
Virtual Meetings
Special Events (Information nights)
Training Sessions
By arranging information in this prioritised manner it is possible to begin developing a framework to determine the alternative pathways to reaching desired information.\(^\text{108}\) The navigational diagrams on the other hand combine these object models to formulate a preliminary navigational structure and page layout. Each informational and functional modelling site map is constructed to display the hierarchical content structure of major components of the site. The *Logged In* and *Conference Centre* home pages are shown below in figures 16 and 17:

\(^{108}\) Brown, *Communicating Design*, 98.
6.1 Conclusion

These models depict the object modelling and navigational design of the proposed site. Incorporating the target user groups’ informational requirements, identified in chapter five, into a controlled hierarchal form provides design direction from which the navigational structure of VITTO can be built. Developing navigational models derived directly from user needs, embraces the project objectives for implementing a User Centred Design structure.
7.0 Stage 4: Implementation Design

Implementation design can be broken into two separate areas, information modelling and functional modelling. Information modelling involves determining how, where and what information will be provided on each page to suit the individual user types. This includes content such as text, images and product specifications as well as the size, layout and quantity of the data required.\textsuperscript{109}

Functional modelling determines how users will interact with the system. The interface tools must provide users with sufficient control to operate and navigate the website intuitively. These can include tools such as language, menus, forms, symbols or point and click navigation.\textsuperscript{110} According to Sommerville, designing an interface should account for both physical and mental capabilities of the intended users by consistently incorporating familiar objects in standardised locations.\textsuperscript{111}

Implementation modelling was completed in the form of wireframes for the three main pages within the site, the \textit{Welcome}, \textit{Logged In} and \textit{Conference Centre}. Each wireframe was completed to reflect the look and size of the chosen interface, an \textit{iPad}. These three pages are displayed below in figures 18 to 20.

\begin{footnotesize}
\begin{enumerate}
\item\textsuperscript{109} Sharp, Rogers \& Preece, \textit{Interaction Design}, 479.
\item\textsuperscript{110} Jeffrey A. Hoffer, Joey F. George \& Joseph S. Valacich, \textit{Modern Systems Analysis and Design}, 5\textsuperscript{th} ed. (Pearson Education Inc: USA, 2008).
\item\textsuperscript{111} Ian Sommerville, \textit{Software Engineering}, 6\textsuperscript{th} ed. (England: Pearson Education Limited, 2001), 330.
\end{enumerate}
\end{footnotesize}
Figure 18: Welcome page
Figure 19: Logged In page
7.1 Conclusion

The development of wireframes sufficiently displays the graphical interface of the proposed design. It incorporates the User Centred Design features identified in stages one, two and three to provide a framework for the website, defining the information, affordances and navigational elements on each page. This interface design is relatively preliminary, as such the layout will continue to be revised and the impact subsequently accessed. Ensuring the implementation design is founded correctly will allow a seamless conversion to the next stage of development, an effective prototype.
8.0 Stage 5: Prototyping

Revisions and exegetical analysis of the prototype at various stages of development saw each page continue to evolve concurrently with collaborator and end user judgements. This saw refinements in several areas including aesthetics, features, layout and functionality, continually improving the User Centred Design. According to Warfel, a good prototyping approach circulates through a continual cycle of sketching, presentation and critique, prototyping and testing.112 A graphical representation of this process can be seen below in figure 21.

![Figure 21: Prototyping Approach](image)

The end result comprises the artefact component of this dissertation. It is a prototype which has been developed to portray how the final website will look, function and fulfil stated user requirement as well as what information it will contain.113 The prototype incorporates all elements derived through previous stages found to effectively facilitate users’ online needs. In total, 14-pages of the proposed VITTO website have been visualised as an online industry tradeshow. These pages are shown in chapter ten. There is also an online clickable prototype example at http://vitto01.businesscatalyst.com/index1.html. A site map is located in appendix H to aid in navigating through the completed pages.

8.1 Conclusion

The prototype resulted from an aggregation of results from four interconnected stages of website development methodology, defining the mission statement, user models, conceptual models and the implementation design. Each stage followed a process of analytically reflecting upon user needs and motivations prior to determining what features or elements could be incorporated into the website to best meet these needs. Intense reflection and re-development of the overall design and graphical interface will continue to occur until such time as the collaborators are satisfied that this paradigm is the most effective example of an online tradeshow format for Queensland industries.
9.0 Detailed explication of the project development

9.1 Introduction

This chapter explains the processes undertaken toward achieving the project outcome and the prototyped product function while accounting for the user scenarios satisfied. Reflection upon the processes undertaken throughout the development of VITTO demonstrates how theoretical and practical research has affected, influenced and contributed to the completion of the project. Several aspects of project development are revisited throughout this process. The prototype is then deconstructed to allow discussion and explanation of the colour, images and text choices made throughout.

9.2 Explication and reflective review of the development process

This section will review the process of project development to identify the steps taken and lessons learned during the creation of VITTO. The methodology adapted for this project follows a five stage approach enabling the integration of an initially theoretical concept, into a completed user-centred prototype. The methodology is detailed within chapter three, but to summarise, comprises of the following five stages:

- Stage 1: The Mission Statement – Clearly defines the intended purpose of the prototype development,
- Stage 2: User Modelling – Identifies the target users and their informational, functional and usability requirements for online applications,
- Stage 3: Conceptual Modelling – Determines the functionality and tools necessary to support project requirements,
• Stage 4: Implementation Design – Designs the look and layout of the prototype to suit user requirements identified in previous stages,

• Stage 5: Prototyping – Provides an example of the final prototype.

To ensure the final prototype and accompanying written component were completed by the due date, a project schedule was conceived. This schedule, located in appendix B, was established within the project proposal to specify the development milestones derived from the methodology, and timeframes in which all tasks must be completed.

The project continued to thrive throughout the various stages of development as a result of persistent re-evaluation and improvements to the reflective process and adherence to the established project schedule. Assumptions regarding the initially complex purpose, capabilities and functionality were re-evaluated and streamlined throughout the development process. This was a result of better understanding user needs through a process of re-evaluating on site user scenarios, design capabilities and the scope of the project.

Although completion of tasks ran on schedule for the majority of project development, during the final stage it was necessary to extend the project’s deadline due to the developer taking maternity leave, the initial timeline was subsequently adapted. This reflective review covers the design processes undertaken during the period February 2012 to October 2012 in part-time distance study mode.

9.2.1 Research Information

The development of work models and conceptual visioning of the paradigm in all forms, from mind maps and wireframes to visual design and the final prototype was a result of the collaborative efforts of Dr Ashley Holmes and Kaylee Boccalatte (referred to throughout as the collaborators). Holmes assumed the position of mentor, delegating and assigning necessary benchmarks. Skype meetings were held
on a weekly basis. Tasks were to be completed and information posted online or sent to Holmes for viewing and evaluation prior to or during meetings.

The project schedule reveals the timeline of development completed. Specific tasks and activities included:

- Defining the purpose of the project,
- Identification of functional and information requirement of the target audience in text based format,
- Development of mind maps and flowcharts to detail and visually display object models and navigational design of the proposed site,
- Development of wireframes to visually represent the look, layout and navigational options of each page,
- Development of 14 graphical compositions of the predetermined key pages to represent the look and feel of the overall VITTO concept,
- Evaluation of the completed graphical representations by the collaborators and external representatives of the target user groups,
- Completion of the written component accounting for the user interface design and social media principles that have informed the design development.

The processes involved in these tasks are outlined below.

9.2.3 Purpose

The purpose of the project is defined in the mission statement discussed in chapter four.
9.2.4 User Requirements

User modelling was initiated following the mission statement stage and continued to be re-evaluated and adjusted during each subsequent stage of project development. Upon completion of the mission statement, an interview, located in appendix C, with an experienced industry representative was conducted to gauge how he felt about the proposed site, what features he would or would not use and how best his needs could be satisfied. This interview with a long term sugar cane farmer, confirmed that the overall concept was appropriate with only minor issues, such as the incorporation of a user friendly search feature, needing to be addressed.

In addition to a target user interview, five separate work models were completed to provide relevant perspective on how online tradeshows would be utilised from the users, suppliers and browsers perspectives. The flow, cultural, sequence, physical and artefact models stem from the contextual design process to provide an understanding of the target audience’s fundamental intents, desires and drivers. These models assist in conceptualising the necessary functionality and features to meet user requirements. By understanding these, it is possible to develop the prototype with the range of relevant processes and steps necessary to allow prospective users to conduct proposed tasks on site.

The information gathered previously was combined with these results to determine how the proposed practices, features and functionality might be incorporated into VITTO. All results were then consolidated into mind maps to visually display the processes and functions users could utilise on site and how they interconnected. Several forms of online collaborative software were trialled to determine the most effective and efficient method for the collaborators to communicate and document share online, all of which are discussed below in section 9.2.6.
9.2.5 Mind Maps and Flowchart Development

In order for the proposal to meet its user-centred objective it was necessary to examine the target audience thoroughly to understand their cognitive behaviours and motivations. The collaborators regularly met online to begin constructing site maps within *MindMeister.*114 This program provided a platform for the collaborators to easily create and share mind maps with each other in real time as shown below in figure 22.

![Figure 22: Mind Map](image.png)

This program was working well until such time as the free trial period ended at which point the collaborators began utilising *SmartDraw.*115 The single mind map began accounting for all actions users could participate in on *VITTO* and how each element was accessed and interconnected. Subsequent meetings resulted in the collaborators deciding that the concept map was becoming unclear and too complex as shown in figure 23. One contributing factor was that the collaborators were each using different labels to describe similar features. In order to resolve this issue it was

---


concluded that a glossary be developed to clarify terminology and define distinctions between terms. This glossary can be seen in appendix D. The second reason for the complexity was that the site maps were becoming too detailed. The increasing number of sub-headings impeded readability and the multitude of arrows showing how specific features interconnect on site was quickly becoming overpowering and confusing for the collaborators.

In order to avoid this, the information located on the complex site map format was altered to suit a text based bullet point format. The text based format worked well for a period of time although the longer and more complex the lists became the less reliably the bullet point system was working. Eventually the document was difficult to read and the hierarchy of items was becoming increasingly unclear resulting in poor readability and viewer confusion therefore it was decided revert back to a visual based application. The collaborators then began utilising another program, Balsamiq to continue mapping VITTO.\footnote{Balsamiq, “Balsamiq,” http://www.balsamiq.com/ (accessed June 8, 2011).}
By this stage the conceptual framework has begun to be established, it was decided to convert the major conceptual requirements to site map headings as a transitional basis for sorting the functionality. Creating the site maps in Balsamiq reduced the complexity as this time they were developed as several smaller maps, displaying solely the content located within each page rather than trying to fit all information on to one large object modelling site map as shown below in figure 24.
These smaller maps were not to include any arrows displaying the interconnection between functions or features, if a feature was accessible from several different locations the feature would simply be listed on several of the site maps. In addition to simplifying the site maps, this exercise was also used to group functional items and site features according to typological logic setting the framework for the development of wireframing the interface layout.

Several weeks of site map revision, re-structuring and re-categorising occurred to ensure the framework was as simplified as possible while continuing to incorporate the functionality necessary for successful navigation through the website and to desired components. Although the process was lengthy it was necessary to get it right, to determine what steps the user would take to reach their intended goals and what system functions were necessary to support each step.

9.2.6 Wireframe Development

From the completed site maps and finalised corporate identity it was possible to easily transfer this information onto wireframes in preparation for commencement of the prototype. The wireframes developed for the prototype were created to suit an iPad portrait sized screen (approx. 768px x 1024px) as shown below in figure 25. The intention was that the interface could easily shrink or expand from this size to suit alternative viewing mediums such as a mobile device or computer screen.117

---

Developing the wireframes integrated theory and research with social practice, providing the opportunity for the collaborators to analyse potential problems in a visual fashion. Wire-framing allowed the developers to begin structuring the layout of the website, incorporating the design features and navigation tools identified during earlier stages of development into a graphical representation. By developing these heuristic wireframes it was possible for the collaborators to begin reviewing, evaluating and re-structuring the arrangement and inclusion of specific elements on the wire-framed pages where necessary.

9.2.7 Graphical Compositions

When the wireframes were at an acceptable level of composition and detail, the collaborators began the process of developing the final prototype. Several web design programs including Adobe Dreamweaver and Adobe Muse were evaluated to determine which was most suitable for the collaborators to utilise for the
development of the prototype. As the designer has limited design experience in programming, it was decided that *Adobe Muse* would be used which allows the development of websites without coding.

Initial attempts at recreating the wireframes as aesthetic and functional graphic representations resulted in limited success due to the boxy and overcrowded appearance. Therefore the entire interface design was adjusted to minimise lines and borders as well as increase the white space to give the overall design a simpler and cleaner look. It was at this point where the collaborators determined it was necessary to incorporate a tradeshow metaphor to increase cognitive association between actual tradeshows and the online version. *Adobe Illustrator* was utilised to create the flag type headings for the various sections of the website which reflect the signs and banners used by exhibitors at live tradeshows.

Further reinforcing the synchronisation between online and actual tradeshows was the discovery of a program allowing the creation of detailed and customisable exhibitor booths. The program, *3D standards* was evaluated to determine if the functionality and resources provided sufficed in developing the types of booths envisioned for *VITTO*. This program allows customisable development of supplier booths in various design, layouts and sizes as described in chapter 2.3.3.

Several weeks of site development, evaluation and revision occurred to ensure the site was completed to an acceptable standard. Upon completing the major structural components of the site the collaborators focused on correcting the basic design principles such as the use of corporate colours, aligned elements, white space and consistent fonts. The building of a sample booth using *3D Standards* for each tradeshow available increased the aesthetic appeal of the overall prototype and added corporate style.
9.2.8 Evaluation  
A full evaluation of the completed prototype is located in chapter 11.

9.3 VITTO Revisions  
This project was revised by the collaborators continually to be refined, altered or adjusted to better suit the stated objectives. Early in project development it was determined that Holmes and Boccalatte entertained two different notions with respect to certain aspects of the sites affordance. Boccalatte was imagining enabling of monetary transactions between sellers and buyers to occur onsite for the purpose of streamlining procurement. Alternatively Holmes suggested that the site forgo facilitating online payment and be used purely as a networking tool for connecting suppliers with consumers. He argued that companies had existing procurement systems that need not be implicated. Existing sites were revisited to determine if they provided a platform for online procurement. It was discovered that existing sites did not provide for user-to-supplier payment onsite. The VITTO site plan was then simplified to exclude all monetary transactions between buyers and sellers, keeping the site purpose primarily for connecting users. Upon deciding a transaction will take place, by provision and acceptance of a quotation, the suppliers and buyers are able to go off site and conduct business as usual, although as they networked on VITTO the buyer will be entitled to exchange their VITTOS for a discount on the purchase.

Although all payment facilities between users were omitted, it was noted that these facilities would still be necessary if VITTO chose to charge specific users for a range of onsite services such as registering, creating a booth and attending private onsite events.

Further re-examination of the features of other tradeshow sites led to a clarification of functional specifications for VITTO. Several of the sites examined charge both buyers and sellers for a varying array of services including buying an
online booth, admission to certain events as well as holding or attending workshops. The issue of how/if/when to charge users on VITTO was raised. Through collaborator meetings it was agreed that access to the site’s Exhibition Centre, Conference Centre and all VITTO features would remain free of charge to buyers. Where payment may be required for access to special events such as private conferences and seminars, there could be online payment options. Additionally, VITTO credits could be gained by notifying a number of their friends of the event by sharing or liking on social networks, e.g. Facebook or Twitter. Alternative payment methods will be at the discretion of the event's host and VITTO.

Suppliers will have full access to ‘Standard Plan’ features the site free of charge for a ’30 day trial period.’ Following the trial period, sellers will have the option to upgrade to one of two subscription plans which are further detailed in chapter 9.3.7. Regardless of what plan the seller has chosen they will be able to purchase additional elements and special features such as MB increase or additional tradeshow listings at a predetermined rate.

During the review process it was determined that most existing sites provided a platform for networking and interactive presentations such as training, workshops and key note speakers in addition to their online tradeshows. Therefore VITTO’s site Conference Centre plan was adjusted to incorporate these types of events in order to provide a similar service to competitors such as Vue2010 and Unisfair.118

9.4 Online design collaboration tools: evaluation

The collaborators reside in geographically distant locations therefore all forms of communication and document sharing occurred online. In addition to the


weekly collaborator meetings via Skype, various online collaborative tools were used throughout the term for communicative purposes, all of which will be evaluated below. Initially MindMeister was used to provide a platform for the online creation and sharing of mind maps. There were many benefits to the collaborators using this application as it allowed real-time information exchange and automatically structured the hierarchical ideas in a neat and easy to read format. The program also allowed the collaborators to attach documents, add notes and email through notifications of new or updated maps to each other quickly and easily. The application served as a useful tool in brainstorming various aspects of VITTO although the collaborators were only able to utilise the site free of charge for one month. Following this free trial period a charge would have been incurred therefore it was agreed that the subscription within MindMeister be cancelled and a new form of collaboration be employed.

SmartDraw allowed the collaborators to convert all information gathered during the mind mapping sessions into flowcharts. This assisted in determining how the flow of information would be available and accessed by the users of VITTO. The program itself worked well allowing the site hierarchy to begin forming. Structuring the information to show the various paths one could take to reach each component of the site proved too complex with a multitude of arrows displaying the various paths leading to different components of the site. Additionally, this program needed to be downloaded on the users’ local computer and although the outcome could be updated and shared, was therefore unsuitable as an online real-time collaboration tool. A move was then made from graphical-based software SmartDraw to text-based formats so the collaborators began utilising Google Docs as their online file sharing application. Google Docs is an online application allowing restricted sharing of
stored file to nominated parties. All completed documents from this point forward were uploaded to this facility for storage, review and alterations by the collaborators. *Google Docs* continues to be used for file sharing and has proven to be a very useful collaboration tool.

*Balsamiq* began being utilised as it provided a platform for refining existing information into usable flowcharts and wireframes. The program provided tools for completing wireframes in detail by having items such as buttons, links and website canvases available from a catalogue of components. *Balsamiq* is an online application allowing invited users to view, add and edit documents quickly and easily. This program’s one downfall, when compared to *MindMeister*, is that it does not allow multiple users into one document at a given time therefore users are only able to view saved documents, not develop them simultaneously.

**9.5 VITTO Aesthetics**

Throughout this paper the practical and theoretical foundations for creating a User Centred Design structure for an online tradeshow format has been discussed. The prototype *VITTO* has been developed as a platform supporting Queensland industry online tradeshows and the architecture will be described below. The use of colour, images and text will be discussed individually as these determinants are consistent throughout the entire site while the layout and functionality will be described separately for each page. Any evaluative reflection is incorporated into chapter eleven.

**9.5.1 Colour**

The application of a dark blue and green colour throughout *VITTO* is consistent with the site’s corporate identity. These two colours and the shades of each are harmonious so as not to distract from the content. The cool colours are
clearly distinguished against predominately white background. This increases text readability and creates an eye-catching and aesthetically attractive design as shown in figure 26. The banner is consistent throughout the website and displays two green bars encompassing a semi-transparent tradeshow map upon which the predominately dark blue logo is located to maximise contrast and draw the user’s eye.

![Figure 26: VITTO's Corporate Colours](image)

9.5.2 Images

Images used throughout VITTO support and reinforce the message or activity the site is sending. Images or illustrations used within this prototype add colour and visual appeal to the pages in turn increasing the attractive and professional appearance. Where necessary, images are facing into the page which unconsciously keeps the viewer’s attention within the page boundaries and on task. An example of this is shown in figure 27.

![Figure 27: Image Facing into Page](image)

Images used throughout the VITTO paradigm were primarily sourced for free online under the creative commons license or from the designer’s collection. The table

---

located in appendix G provides a copy of the online images used and the link from which it was sourced.

9.5.3 Text

Topics are clearly labelled and all content is broken into small paragraphs encouraging users to read through the information without being overwhelmed with material.\textsuperscript{120} The font used on each page has consistent design characteristics and is easy to read, reflecting a professional and modern appeal. Fonts used in similar places on site such as in page headings, shown in figure 28, are kept the same size and colour to maximise consistently throughout the site.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{Vitto.png}
\caption{VITTO Page Heading}
\end{figure}

9.5.4 VITTOs

Users are able to view the number of VITTOs they have collected at any given time in the main heading of the website shown in figure 29. This positioning maximises the VITTOs visibility to all users in turn potentially increasing the opportunity for users to take an active interest in the voucher system. By clicking on the icon in the banner or navigating to the VITTOs page within the Briefcase, users are able to get a breakdown of how they have earned and spent their VITTOs as well as access other virtual voucher related information.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{Vitto.png}
\caption{VITTOs and Networking Location on VITTO}
\end{figure}

\textsuperscript{120} Spritz Web Solutions, “Does Your Website Have What It Takes?”
9.6 Conclusion

Explication and reflection of the approach adopted for the development of this website demonstrate how theoretical and practical research has been implemented into the project to satisfy the user scenarios. The choice of colours, images and text used throughout the prototype are explained by highlighting their aesthetic value to members of VITTO.
10.0 The prototype

10.1 Introduction
In order to successfully portray the VITTO website each page is individually reviewed to discuss how the layout, functionality and design satisfy user needs. Additional features such as VITTO’s screen size and explanation of membership options available to registered users are also detailed to provide a more in-depth understanding regarding the sites limitations and intents. Figures 30-58 in this dissertation depict final visuals of these pages and elements within them.

10.2 Constant VITTO elements
The consistent use of the VITTO logo in the top left of the banner and repeating elements throughout the site allow users to clearly recognise and associate each page as a part of VITTO. The top menu bar is repeated on each page and contains link to the most important pages on the site, Logged In, Briefcase, About VITTO and VITTO Help. While the networking button located underneath the top banner (figure 29 above) provides the users with access to socially connect on every page of the site. A consistent use of text, colour, whitespace and alignment of elements throughout the final design portrays a professional and aesthetically attractive appearance, evoking a positive emotional response from users. The consistently used blue to green gradient flag headings further separate the various sections of VITTO and were designed to metaphorically reflect tradeshows. Deng and Poole state that a user’s emotional response to the visual components of a website can elicit various behavioural responses.\textsuperscript{121} By maximising the consistency of the navigational structure, employing intuitive functionality and promoting a

\textsuperscript{121} Deng and Poole, “Affect in Web Interfaces: A Study of the Impacts of Web Page Visual Complexity and Order,” 721.
homogeneous layout, the site will facilitate positive emotional responses. A breadcrumb trail located prominently underneath the logo at the top left of the page provides users immediate sense of location, as well as direct navigation to previous sections of the site.

The site pages discussed individually below, display a structurally sound interface, incorporating a good balance of information, functionality and aesthetics. VITTO been developed to be highly user friendly as consumer satisfaction will be variable depending on the users level of computer literacy, prior experience and understanding of product requirements and goals. 122

The content is substantive and presented in a clear and concise form, satisfactorily informing the user of what the site is for and how it works. There are no borders or superfluous elements within the site and by maximising the use of whitespace, a simple and minimalistic look has been created. VITTO has been developed for an iPad which utilises a multi-touch interface. The interface therefore, has been designed with white space surrounding components and buttons that are a reasonable size to allow sufficient room for fingertips and pens to be used as mediums to interact with the site, rather than a mouse. The interface contains relevant tools and features allowing the user to perform anticipated tasks such as attending tradeshows and networking on site. Additionally, buttons and links on the site have no mouse overs or hover state changes as these do not activate on an iPad.123

122 Warfel, Prototyping, 6.

10.2 Welcome Page

Figure 30 shows the Welcome page which is the first point of contact all users will have with VITTO. This page sets the tone for the entire website with the layout being clear, uncluttered and well-structured, utilising a user-intuitive navigational design similar to Prezi’s home page shown in chapter two. The Register Now button is large and placed in the top half of the screen increasing its prominence and maximising the opportunities for users to click it. 124 This page creates enough visual impact to draw the user’s eye from the strong heading to the images and following subheading maximising impact and increasing opportunity for users to read the information located on the page. A short pitch about VITTOS is centralised on the bottom half of the page to entice viewers into using VITTO due to advantages of the virtual voucher system. Due to the text being broken in to small chunks and accompanied by images, the user is inclined to read all information present on this page. 125

---

124 Spritz Web Solutions, “Does Your Website Have What It Takes?”

125 Ibid.
10.3 Logged In Page

The *Logged In* page is shown in figure 31. This page acts as the home page of the website for registered users upon logging in. Every main section of *VITTO* is accessible from this page including:

- *Exhibition Centre*,
- *Networking Centre*,
- *Conference Centre*,
- *What’s New*,
- *Upcoming Events*. 
The Exhibition Centre is displayed prominently on screen giving users a preview of three of the supplier’s booths and direct access to each of the tradeshows; Mining, Manufacturing, Cattle and Agriculture. These tabbed menus contain a basic slideshow of a small number of booths within each industry giving users a preview as to what companies, products and brands are listed within each expo. The examples shown in figures 32 to 35 are static representations of the slideshow feature. In each instance, the first of three company booths is being displayed.
Figure 32: Mining Expo Preview

Figure 33: Manufacturing Expo Preview
The *Networking Centre* provides users with the means of communicating with each other and all suppliers listed on the network. Users are able to chat with others publically or privately, send personal messages and search for other buyers and sellers. The *Who’s Online*
button allows users to quickly see how many of their contacts are online, and by clicking on this button the user is able to select an individual or group of contacts they would like to chat with. The subheadings under Favourites and Interests are customisable thus allowing users to incorporate and interchange their frequently used components of the site including:

- Suppliers/products/industries followed,
- Notifications including open or upcoming tenders within the relevant industry,
- Sales for followed suppliers, industries or products,
- Social media feeds.

Current seminars and conferences are listed under the Conference Centre heading to give users an insight as to what is happening within the Conference Centre. While the What’s New section details interesting happening within VITTO such as new tradeshows, new suppliers listed, special events or developments within the site, the Upcoming Events component highlights future dated events likely to be of interest to users. All upcoming events are able to be added to the user event calendar to ensure they are registered and reminded of the event when it occurs. In the bottom right of this page are sponsors or paid advertisements.

**10.4 Exhibition Centre**

The Exhibition Centre shown in figure 36 is a centralised location for the four different industry tradeshows. The left hand side provides the users with a search function and menu allowing users to directly pursue or browse through the VITTO database for a specific booth, product or contact. The right hand side of the screen clearly shows the users what tradeshows are currently available, in this case, Mining, Manufacturing, Cattle and Agriculture. Within each tradeshow a number of highly rated booths are displayed to portray what booths are available.
10.5 Expo Pages

The Expo pages for **Mining**, **Manufacturing**, **Cattle** and **Agriculture** are displayed below in figures 37 to 40.
Figure 37: Cattle Expo Page
Figure 39: Agricultural Expo Page
Each of these Expo pages contains the same features and functionality therefore will be evaluated together. The Expo pages are made up of the supplier booths advertising their goods and services for sale. There is an industry relevant booth example provided for each of the four tradeshows. The booth design is repeated throughout the Expo page in various shapes and sizes to provide an accurate portrayal of the booth sizing options available to exhibitors on VITTO. Although these pages are examples of the size and layout options available, the position of booths within this page will be hierarchical. Ads located at the top of the page get viewed about 85-95% of the time which increases visibility and potentially number
of leads generated. Therefore the largest (and most expensive) booths will be located prominently at top of the screen while the smaller (and less expensive) booths towards the bottom.

The search feature on the right again allows users to search for a booth, product or contact within the specific tradeshow. The *Create Booth* button is located prominently on all tradeshows pages making it highly visible and encouraging users to sign up as suppliers. Clicking on this button will direct the user to a registration page where they will have to sign up as suppliers and pay a fee depending on the size booth and listings they would like. From this they will be directed to the *Creating Booths* page discussed in the next section.

### 10.6 Creating Booth

Users will be able to begin the process of creating their booths for *VITTO* by completing a simple online form, shown in figure 41.

---

This page requires user input into a field prior to providing any subsequent questions. All options are in the form of checkboxes or radio buttons, minimising room for error by presenting the user only with relevant options. This feature will allow VITTO to ‘read’ if the user has input the required or correct information. For example if the user has selected to have a booth at one tradeshow, they will not be able to select any more than one expo to be listed at.

For the creation of booths, users will have the option of displaying their booths in any one or more of the available tradeshows Mining, Manufacturing, Cattle and Agriculture although each additional trade show listing will be at a charge.
Selection of the site size is conducted through radio buttons therefore the user can select only one option per account. At this stage of development if the user were to select the option of appearing in two or more tradeshows they must have the same site in each one to minimise the initial complexity of the program. Upon selecting a size the page will again expand showing the cost and screen dimensions of the selected sized site.

There are six different sized booths available for suppliers to choose from (each at a different price and detailed in VITTO membership below) a 1x1, 1x2, 2x1, 1x3, 3x1 and 2x2 as shown in figure 42.

![Figure 42: Booth sizes available](image)

Users will then be able to select from two booth design options, import a pre-existing design or create a new one. If the user selects to input a design they will be directed to a schematics page providing them with the information, specifications and details of the limitations upon clicking *Create*. Although if the option to create a new booth is selected, the user will be directed to *VITTO’s* partner *3D Standards* to develop their booth on completion of the form and receiving payment.

### 10.7 Conference Centre

The *Conference Centre* is the centralised location for all conferences, seminars, lectures, focus groups, special events and training sessions that will occur on site and shown in figure 43.
Figure 43: Conference Centre

Links and previews of events currently being held in each of the aforementioned areas are located in the tabbed menu bar at the top of the page. The user is able to click on a tab and the relevant promotional events will appear. The various tab options are shown in figures 44 to 49. The user is able to scroll through the advertised events within each category and can enter a specific event by clicking on the relevant advertisement’s image or underlying text.
A paid advertisement is centralised on the page while the sponsors of the site are listed in the bottom left corner, both of which will take the user to a page detailing the content of the advertisement if clicked on. Upcoming events are listed at the bottom right. Clicking on the notices will take the user directly to that events registration page while clicking on the banner title will direct users to a list of all upcoming event’s.

10.8 Conference – Making Your Business Virtual

The page displayed in figure 50 shows an active Video Conference. The host is prominently placed in the top left with a large screen to increase his visibility to all participants, as he will be the focus of attention for the majority of the conference. On the right of the page is a list of users participating in the event. These images can be clicked on for access to personal chat options or viewing their profile. If the user would like to participate in the conference to voice an opinion or talk amongst the group of participants they are able to utilise the Message feature at the bottom of the screen. All content written and uploaded within this section are public.
10.9 Briefcase

The Briefcase shown in figure 51 is a centralised location for users to keep and access all personal and saved information from on site. The top component of the screen displays the user’s contact details which are publically viewable to all buyers registered on VITTO. The Settings and Profile buttons will link to the relevant areas of the site allowing users to be in control of their accounts. The users profile image or avatar is customisable (details shown in section 9.3.5.9 below) and easily accessible through the Profile button. On the right hand side of the screen is where the users can see the number of VITTOS they have accumulated. The button
located underneath the symbol will provide access to the users VITTOS information and history.

![Image of Briefcase Page]

Figure 51: Briefcase Page

The bottom half of the screen displays a tabbed menu giving the user access to their saved contacts, messages, saved files, booths and followed interests by clicking on the relevant TAB. The ‘pencil and paper’ icon, located on the top right side of all tabbed menus provides users with access to altering information or settings on each of the tabbed menu options. The various TAB options are shown (figures 52 to 56) and explained below.
The *Contacts* TAB displays other registered users whom are considered friends, colleagues or associates. The contacts names are displayed in random order and rearranged each time the page is opened. As the contacts list is the default TAB that will be on display when a user opens their briefcase, it serves to provide a fresh look each time the *Briefcase* is opened.

The *Messages* TAB keeps a record of all written communication to and from suppliers and other contacts on site. This TAB additionally stores messages notifying
the user of upcoming events. If the user has registered for a specific event they will receive a message confirming their registration status along with a link allowing them to save the dates to their outlook calendar.

Figure 54: Saved Files Menu

The user is able to save selected documentation to the Saved Files TAB, including conference transcripts, chat dialogue, personal notes and results of focus groups. These can be sorted by date or by type providing easy access to specific files at all times. Additionally all documentation passed from suppliers can be stored within a briefcase, these items may include product brochures, schematics or links to external websites such as YouTube.
The **Favourite Booths** feature allows users to create a listing of their frequently visited booths for easy access to products and services sold by the supplier. If selected, a user can choose to notify the supplier upon saving their booth to this list, allowing them to receive product or information updates.

The **Followed Interests** TAB allows users to customise a list of favourite followings, interests and suppliers to keep up-to-date with the latest developments in the relevant fields. In the **Followed Favourites** section is a list of news feeds the user
is subscribed to and the events the user has registered receive event and information
and notifications from. The top right displays a list of notifications sent to the user.
These including things the user must act upon such as confirming a contact request
or supplying a brochure to a customer. The bottom of the page lists the user’s
interests allowing them to be contacted when related items or events are added
within VITTO. This feature is designed with vast flexibility to keep users on site as
much as possible rather than utilising external applications.

10.10 Avatar Creation

VITTO provides three options for users to choose from when determining
their avatar or image that will be used to represent them to the rest of the VITTO
members. The user is able to upload an image from their computer, select one from
the list provided or create their own. The onscreen options will change depending on
which option the user selects. If the user selects the Upload option a button will
appear asking users to browse for their image. In figure 57 the user has chosen to
Select an avatar therefore the large range of avatar images are displayed. Whereas
the last choice allows users to express their individuality by Creating an avatar. This
will be completed through selecting all individual elements such as hair, eyes, nose
and lips before bringing them all together to create a face.
10.11 About VITTO

This page clarifies what VITTO specialises in and what the website is able to offer users. The page also serves to reinforce a significant point of difference within the online tradeshow community which is the incorporation of VITTOS, the virtual voucher system. A short pitch about VITTOS is centralised on the bottom half of the page to grab the viewers’ attention and enforce the importance of the virtual voucher system and the benefits to consumers. The About VITTO page contains no unique functionality as it is solely used for the supply of information, shown in figure 58.
As discussed previously the design has been tailored for iPad proportions. A horizontal layout was developed which is shown below in figure 59.
10.12 Instruction

*VITTO* is primarily intuitively instructed meaning the user instructs the website what to do by pointing and clicking or tapping on a menu item or button.¹²⁷ When users register for events, saves them to their calendar or states their interest in an upcoming event *VITTO* will record this data in the briefcase and instruct the user by reminding them that a selected event is on. This feature allows users to keep an onsite diary so they don’t forget when selected events are on and also benefits *VITTO* event hosts as their attendance numbers would likely increase. The *Help* button is located prominently in the top navigational bar ensuring that assistance is available for users on every page of the site.

10.13 Content

A user’s attention is influenced by many factors within a website including the content.¹²⁸ According to Sharp, Preece and Rogers, when users view a website they do not read from top to bottom, they scan the page and start reading whatever

---


content grabs their attention.\textsuperscript{129} With this in mind, it is paramount that all content on the site have substance and be relevant to the site’s purpose and the target audience.

The information listed on VITTO is clear and concise, informing the user immediately about the subject matter at hand without superfluous elements. On site text is typed in a colour highly contrasting to the background, clearly labelled and broken into small chunks motivating users to read through the information.\textsuperscript{130} Due to the tradeshow format being in 2D rather than 3D and online rather than in real life, VITTO has incorporated the use of visual metaphors. These metaphors create an unconscious association with actual tradeshows, when onsite. Three metaphorical elements are present on VITTO with the first being the tradeshow site map in the banners background on the top of each page. This site map is used as a key for actual tradeshows, directing users to the location of the site number or exhibitor they would like to visit. The second element is the gold coin in the VITTO logo, which represents the VITTOS virtual voucher system, further discussed in chapter four. Finally the gradient, green to blue headings used through the site are designed to reflect the look of a flag as flags and banners are used throughout traditional tradeshows by exhibitors to distinguish themselves from competitors.

\textbf{10.14 VITTO Membership}

VITTO is reliant on connecting sellers with buyers, therefore buyer membership is free of charge which will potentially increase the number of buyers through the site.\textsuperscript{131} Registered buyers will have access to all areas of the site, except those restricted to sellers such as creating booths, analytics and the affiliation status.

\textsuperscript{129} Ibid.

\textsuperscript{130} Spritz Web Solutions, “Does Your Website Have What It Takes?”

\textsuperscript{131} Hardin, “Forced Registration: Pros and Cons.”
of other buyers. Additionally, the charge for entry or participation in events held on 
*VITTO* including conferences, seminars, lectures, focus groups, special events and 
training sessions will be free of charge unless otherwise stated by the host.

Suppliers will be offered a 30-day free trial period to evaluate the tradeshow 
services offered by *VITTO*. Offering a free trial period has been found to increase 
company profits and decrease pre-term cancellations of memberships according to 
Alt.\(^{132}\) During this time suppliers will have access to all ‘standard membership’ areas 
of the site with no limitations restriction their options or capabilities. This will 
ensure the supplier experiences the *VITTO* advantages thoroughly before making a 
financial commitment to become a registered supplier.

Upon reaching the end of the trial period, suppliers are given the option of 
subscribing to one of two membership options, standard or premium. Premium 
membership would allow users to access additional features such as an increased MB 
allowance, additional booth features and increased functionality.

**10.15 Conclusion**
The *VITTO* prototype has been deconstructed to discuss the layout, functionality and 
design features present on each page and how these elements satisfy user needs. The 
instruction, content and membership options present are also detailed to provide a 
greater understanding of the sites capabilities and features. These elements will all be 
evaluated in the following section.

\(^{132}\) Brian Alt, “Free Trial Offers Tested,” Marketing Experiments, 
September 30, 2012).
11.0 Evaluation

Having explored the possibilities for an online tradeshow format and finalising a User Centred Design structure for the development of Queensland industries tradeshows, it is necessary to perform a qualitative and heuristic evaluation of the project. Evaluation occurred in accordance with the procedure developed within the methodology discussed in chapter three.

The prototype was evaluated at various stages throughout the development process by the lead investigator and supervisor to eliminate logical inconsistencies and to ensure the final product satisfies objectives with regards to Activity Theory and Contextual Design. This was conducted by following a process of reflecting upon the current design, reviewing user needs and extending the capabilities of the prototype to encompass these needs. It was also necessary to ensure sufficient on site tools available for users to take meaningful action toward achieving their goals.

Evaluation of the project addresses the overall quality of the product, values it portrays and consumer satisfaction, as evidenced in features such as:

- Design and Navigation,
- Interface,
- Instruction,
- Content of product suitable for all users.\textsuperscript{133}

In order to meet the cognitive needs of users, the main pages, \textit{Welcome}, \textit{Logged In} and \textit{Conference Centre} contain focal points, a place where user’s eyes will be drawn immediately upon using \textit{VITTO}.

The navigational structure of the site is influenced by the target audience therefore it was created highly user intuitive so limited computer literacy is not a

\textsuperscript{133} Holmes, Lecture 2: Testing and Evaluation, 2.
factor in user deterrence. User satisfaction with the final paradigm is gauged with a preliminary questionnaire relating to all aspects of the site including navigation, design and content.

11.1 Questionnaire Results

Explication of the project allowed the developer to reflect upon the theoretical and practical knowledge learned through project progression and how it was applied throughout the developmental stages of *VITTO*. Preliminary surveys were then conducted to appraise the prototype and determine if industry needs are met in terms of design, features and uniqueness. Four surveys were conducted in total, one from a representative of each industry targeted within *VITTO*. The prototype was then subsequently deconstructed to allow discussion of the design, layout and functionality choices made.

Evaluative questionnaires provided valuable feedback from four members of the target audience, one from each relevant industry, *Mining, Manufacturing, Cattle* and *Agriculture*. These can be found in appendix E. The questionnaires focused on an evaluation of the final prototype, specifically the areas stated by Holmes as being of great importance, these include:

- Navigation,
- Design and Features,
- Interface,
- Instruction,
- Content of product suitable for all users.\(^\text{134}\)

In preparing this evaluation it was necessary to consider the intermittent design issues, discussed in chapter 10.6, associated with viewing the prototype online. To improve the chances of evaluating a realistic portrayal of the prototype’s

interface design the respondents were instructed to open the window in *Mozilla Firefox* and refresh each page prior to reviewing.

Results of the questionnaire reinforced the navigational, design and interface choices made for *VITTO*. All respondents were satisfied with the navigation and instructional features of the site with each of them intuitively traversing through the various pages. Buttons and links were easily identifiable and the page hierarchy was found to be highly pragmatic.

Evaluation of the design and features on site proved the elements contained within each page are relevant to the target audience, striking a good balance between aesthetic design and the necessary tools to allow users to complete desired tasks. A valid suggestion for improvement was to add a forum where all members of an industry can connect to exchange information and ask/answer questions.

The *VITTOS* concept was embraced by all respondents, providing the system is and continues to be quick and easy. These positive responses increase the viability of implementing a successful virtual voucher system.

The final evaluation provided positive results with all users agreeing that the interface and content decisions made for the website were sound. Implementing a feature allowing users to export or sync online data including calendar, message and contact information back to a personal computer would further benefit the site. Although the results of the questionnaire are too small and indiscriminate to be considered statistically relevant, the overall outcome was that 100% of respondents stated they were satisfied with the site’s substance and relevancy to the proposed target audience and they would participate in *VITTO*, if ever fully developed.
11.2 Prototype Exclusions

There are several items excluded from the prototype due to the limited programming experience of the lead investigator although they should be included if the project is further developed. These include;

- Statistics, tracking and analytics – Information such as traffic numbers, number of site/page visits and conversion rates need to be readily available for the supplier in a downloadable format such as excel.\(^{135}\)
- Dynamic pages, such as the Creating Booths page - These cannot be properly experienced in a static environment,
- Virtual Salesperson – A virtual person that is able to respond accurately to several predetermined questions that may be asked by the user,
- Tenders – Registered suppliers will be able to notify users when upcoming jobs are open for tender submissions.

11.3 Further improvements or development

The paradigm has the potential to expand to address other prominent Queensland industries or become a national tradeshow incorporating Australian Industry leaders. On a localised scale, \textit{VITTO} can be further improved by addressing the limitations noted where software capabilities and programming inexperience restrict the functionality and appearance of the site. Investigation into additional site pages and functionality similar to those suggested in the customer questionnaires would increase target user satisfaction. The incorporation of audio on certain pages, such as chatting in the background, could increase the tradeshow type feeling. While

\(^{135}\) Bowlby, “15 Key Elements All Top Web Sites Should Have,” 3.
providing a platform allowing users to ‘compare’ selected products and services side by side would also be beneficial.

Potential future work may involve creating a complete prototype or hiring a third party programmer to develop a fully functional application online. If so, it would be necessary to perform a more in-depth target user experience questionnaire to further refine functional and navigational features as well as tool requirements. Additionally, the incorporation of payment facilities will be necessary if VITTO charges users for onsite services such as booth size and listings. Investigation will need to be completed into what payment facilities are available as well as how the site will handle monetary transactions and client privacy effectively. In addition to privacy standards, ethical provisions and company policies would also have to be investigated and complied if the project is taken live.

Further investigation into VITTO’s needs for the booth creation feature and partnering options 3D Standards offers would be beneficial if the site were to be further developed.
12.0 Conclusion

This project began with the assertion that, given the dominance of social media online, the emerging shift from traditional procurement outlets toward online consumerism and the expansion of high speed internet throughout Queensland, surely there was a place for online tradeshows.

This dissertation’s primary objective was to develop a prototype for an online tradeshow format targeting large Queensland industries accompanied by a written component accounting for User Centred Design structure and social media principles that have informed the design development.

This research has examined and discussed the User Centre Design approach taken to facilitate collective intelligence and networking in the field of social media. By following the five stage methodology created from a culmination of information gathered from Holtzblatt and Beyer, the Activity Theory and De Troyer, VITTO was developed as a 14-page graphical prototype. Results of the evaluations conducted in house and by industry representatives showed that the prototype displayed intuitive interface design and provided users with sufficient tools and navigational capabilities to fulfil social media requirements.

The fundamental research questions have been answered through the development of VITTO by;

1. Determining a novel solution to developing an online tradeshow format and creation of a User Centred Design structure for the development of Queensland industries tradeshows online.

   a) Determining the target audiences motivations and actions with respect to procurement and how would these convert practically and
aesthetically to activities and functional operational requirements for an online tradeshow format.

b) Determining what type of informational and functional aspects can be observed in existing examples and how could they be improved upon.

c) Determining the most appropriate method of introducing a virtual voucher system to motivate engagement with the site and provide incentive for procurement activity.

d) Determining what third party applications are available as plug-ins, mashups, and other partnerships to maximise utility and rationalise social media collaboration.

e) Determining the functional and interface tools needed to support project requirements.

The second strand to this research reflected upon the design process itself. Questions that arose in this regard were:

- How useful are the User Centred Design principles in accomplishing design of innovative commercially attractive social media applications?

- Does the Activity Theory framework offer a useful way to analyse and plan for social media application?

- Are there new tools amongst emergent software that offer utility for aspects of creative development, particularly with respect to social media?
The prototype VITTO clearly demonstrates a novel solution for online tradeshows embracing both social media and online consumerism to provide a platform for Queensland industry representatives to trade online. VITTO has demonstrated that by identifying the target audiences actions and motivations for online procurement and meeting these by implementing user intuitive design, and aesthetic considerations in addition to recognised functional and informational requirements, the user satisfaction rate increases. There are actually quite few artefacts providing an online tradeshow format although only one targeting Queensland industries.

A review of existing artefacts provides a depth of understanding as to what current industry standards are in relation to the services and interface tools offered for completing tasks within the tradeshow format. If VITTO is further developed it is suggested that large and complex aspects of the site such as the creations of booths, programming and monetary exchange be outsourced. This is in line with social media and produsage principals.

The virtual voucher system VITTOS has been incorporated into VITTO allowing users to systematically earn vouchers through goal driven activities and participating in onsite events. The vouchers are then used in place of a discounts on purchases made through VITTO networks.

This research lays the foundation for a new approach to online tradeshow compilation. It contributes applied knowledge to the field of social media in terms of exploring new concepts and techniques for an online tradeshow format and as well as new virtual collaborative and creative development tools. While much of the thought processes, complexities and groundwork are concealed in simplicity of the
resulting visualisations, this prototype is a significant early step in the development of the website.

The results of the final prototype’s evaluations, provides a positive indication that the design approach is appropriate for the target audience and if further developed, could have success in a live setting.
References

3D Standards. “3D Standards – an online tool for visualising exhibits and displays.”

Accounts Payable News. “Reducing the Costs of Administering Procurement.”

Adobe Illustrator. “Shear Objects.” Illustrator / Scaling, sheering, and distorting objects.


Apis. “Components of a Successful Website.” Apis.


Australian Industry & Lifestyle Exhibition. “Home Page.”


Bahnish, Mark and Bruns, Axel. “Social Media: Tools for User-Generated Content Vol 1.” Smart Services CRC.


## Appendix A Methodology

<table>
<thead>
<tr>
<th>Requirements &amp; Solutions</th>
<th>Mission Statement</th>
<th>Contextual Inquiry</th>
<th>Review of existing artefacts / Activity Theory</th>
<th>Interpretations Session</th>
<th>User Modelling</th>
<th>Work Models and Affinity Diagramming</th>
<th>Conceptual Modelling / Visioning</th>
<th>Define &amp; Validate</th>
<th>Implementation design/Storyboarding</th>
</tr>
</thead>
</table>
|                          | Troyer stipulates that a mission statement should provide the developer with clear requirements for the system as a whole.  
[136] Warfel, *Prototyping*, 28-29. | Research the target audience and their actions. Ask questions where necessary to unfold and understand their motivations. | Review similar existing applications. Interpret the psychological requirements of target audience and how tools affect their behaviours and decision making | Interpret the data to capture key issues. | Categorise intended users prior to determining all functional and informational requirements of each category. | Five separate work models are used to provide relevant perspective of how work is done:  
- Flow model – captures communication structures.  
- Cultural model – captures policy and culture containing work.  
- Sequence Model – captures detailed steps performed to accomplish each task.  
- Physical Model – shows physical environment that supports or hinders work.  
- Artifact Model – shows artifacts created and used during work.  
Consolidate the information above into one large model. | Use the information gathered above to envision how work practices can be improved including functionality and interface tools which can be used to support and enhance project requirements. | Create a storyboard for completing the tasks within the new system including the steps the user must take and system function that supports each step. | }
<table>
<thead>
<tr>
<th>User Environment Design</th>
<th>Design a system to support this new work including each part of the system, how it supports the users work, what function is available in that part and how the user gets to and from other parts of the system.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prototyping</td>
<td>Computer based or hand drawn prototype showing images, interface and navigational structure of the design allowing users to understand the look and feel of the intended project.</td>
</tr>
<tr>
<td>Interaction and Visual Design</td>
<td>Evaluate and reflect upon the final design look and expected user experience.</td>
</tr>
</tbody>
</table>

Methodology Model and Contextual Design Process (Source: Holtzblatt & Beyer, Contextual Design,” 2.)
## Appendix B Project Schedule

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Start Date</th>
<th>End Date</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirements and Solutions</td>
<td>01/07/11</td>
<td>25/09/12</td>
<td>236</td>
</tr>
<tr>
<td>Mission Statement</td>
<td>01/07/11</td>
<td>13/02/12</td>
<td>156</td>
</tr>
<tr>
<td>Contextual Inquiry</td>
<td>01/07/11</td>
<td>19/08/11</td>
<td>36</td>
</tr>
<tr>
<td>Review of existing artefacts / Activity Theory</td>
<td>19/08/11</td>
<td>09/09/11</td>
<td>15</td>
</tr>
<tr>
<td>Interpretation Session</td>
<td>19/08/11</td>
<td>06/12/11</td>
<td>78</td>
</tr>
<tr>
<td>User Modelling</td>
<td>19/08/11</td>
<td>06/12/11</td>
<td>78</td>
</tr>
<tr>
<td>Work Models and Affinity Diagramming</td>
<td>09/03/12</td>
<td>25/05/12</td>
<td>56</td>
</tr>
<tr>
<td>Conceptual Modelling / Visioning</td>
<td>09/03/12</td>
<td>25/05/12</td>
<td>56</td>
</tr>
<tr>
<td>Define and Validate</td>
<td>09/03/12</td>
<td>28/09/12</td>
<td>146</td>
</tr>
<tr>
<td>Implementation design / Storyboarding</td>
<td>09/03/12</td>
<td>25/05/12</td>
<td>56</td>
</tr>
<tr>
<td>User Environment Design</td>
<td>06/07/12</td>
<td>28/09/12</td>
<td>61</td>
</tr>
<tr>
<td>Paper Mock-Up Interviews and Final Evaluation</td>
<td>06/07/12</td>
<td>28/09/12</td>
<td>61</td>
</tr>
<tr>
<td>Prototyping</td>
<td>06/07/12</td>
<td>28/09/12</td>
<td>61</td>
</tr>
<tr>
<td>Interaction and Visual Design</td>
<td>06/07/12</td>
<td>28/09/12</td>
<td>61</td>
</tr>
<tr>
<td>Holidays</td>
<td>01/10/11</td>
<td>05/07/12</td>
<td>200</td>
</tr>
<tr>
<td>Holidays - First</td>
<td>01/10/11</td>
<td>04/11/11</td>
<td>26</td>
</tr>
<tr>
<td>Holidays - Second</td>
<td>04/02/12</td>
<td>08/03/12</td>
<td>25</td>
</tr>
<tr>
<td>Holidays - Third</td>
<td>26/05/12</td>
<td>05/07/12</td>
<td>30</td>
</tr>
</tbody>
</table>
Appendix C Industry Interview

Name: John Gilbert  
Age: 29  
Farming for 10 years  
Things he needs:

- Easy to use.  
- Minimal typing.  
- Quick delivery.  
- Would likely browse through all supplies to get best value for money - likely do this each time.  
- Would make effort to attend tradeshows that only ran for a limited timeframe (online).  
- Need a search feature.  
- Likely search by product type.  
- Group by job type e.g. irrigation, spraying, fertilising, and maybe machinery / equipment.  
- Yes use a virtual assistant as long as they weren't annoying, would be good to be able to ask her things like how to find a product like a real person in a store.  
- People need a special permit to buy poison.  
- Want specials emailed through and notification that sale is coming up.  
- Save going up the street and having it delivered on time would probably save half a day going into town.  
- Like to check weather online so if this was on home page would be good.  
- Would use virtual currency if made products cheaper;  
- Probably would not attend conferences.
Appendix D Glossary

Glossary

Virtual Vouchers
Voucher system. Buyers will accumulate vouchers and submit these in return for the vouchers relative value to receive a monetary discount when they purchase form a supplier sourced on site. The supplier must agree to provide a monetary discount in exchange for the virtual voucher upon registration. Can be named credits, vouchers

Networking Lounge
A place where online users can go to network and communicate with each other privately or publically.

Resource Centre
A place where all past presentations, public conferences, speakers are kept. This will allow all users to review the content of these at all times.

Briefcase
Virtual briefcase, can keep notes, information, documents, videos, audio etc in this on-site. Place to store items you would like to keep your eye on. Don't want them enough now to add to shopping basket but what their information available quickly in future.

Address Book
Place where e-business cards or contact details are kept on site

Buyers
People buying goods on-site

Sellers
People selling goods on-site

Generic Users
Browsers, people with no on site purpose.

Product/goods/items
Things available for purchase on-site

Trade show
Overall site is considered a permanent or term-less trade-show bringing together QLD industry

Expo
Name of event held on-site e.g. mining Expo, farming expo

Trade-show, field day home show, fair exhibition, convention, exposition, expo, trade fair
Site, store, display, exhibit

Conferences
Group of non-related people gather to hear specific people discuss and share their
knowledge and techniques - private or open to all

**Meetings**
Group of associates meet to discuss agenda items - open to selected few

**Announcements**
Public announcements on site.

**Training**
Training company staff, customers or users in latest techniques or chosen skills. Can be live video, pre-recorded video or training materials.

**Internal Meetings**
Bringing together staff for meetings online - new product information etc...

**Measurements and statistics**
Track who logged on for events, activities within that event, who showed up, where they visited, materials they visited, what was downloaded, how interactions occurred, gathered a range of demographics and psychographics.
Appendix E Evaluation Surveys

**Cattle:**

*Gender:* Male  
*Age:* 76

**Industry experience:** born and raised in the cattle industry, Retired at 70.

1.0 Navigation & Instruction

1.1 Do you think the site is easy to navigate/find your way around?  
*Yes depends what I am looking for I suppose but it think so.*

1.2 Do you know where you have to click to get to desired location?  
*Yes, if I want to go to Conference Centre I click on Conference Centre.*

1.3 Can you find your profile and tell me if it was difficult?  
*What’s my profile? I suppose that would be in my briefcase. Yes, there it is.*

1.4 Is there anything you don’t like?  
*I don’t think so Kaylee as long as I can use it I am happy.*

1.5 Is there anything you would like to see added?  
*I wouldn’t know what else there is to include.*

2.0 Design and Features.

2.1 Does the design appeal to you – colours, layout, design, images?  
*Yes it doesn’t have all those ads and noise like the other ones [websites] have these days.*

2.2 Does it look professional? Like an online tradeshow?  
*Yes, my oath very professional.*

2.3 Is there anything you don’t like?  
*I don’t think I would be able to read it on the iPad might be a bit small– my eyesight’s not what it used to be.*

2.4 Is there anything you would like to see added?  
*No, Kaylee, No*

2.5 Do you think the virtual voucher system VITTO would encourage you to use the site?  
*Yes I might be able to buy more stuff – could tell Dianne [partner] that I got them on sale.*

3.0 Interface & Content

3.1 is it obvious that you click on buttons to navigate through the site?  
*Yes*

3.2 You can add events you are interested in or registered to attend to an onsite calendar. Would you use this?  
*I’m not really sure honestly.*

3.3 Can you read the content on two pages of the site (just pick two). Is it relevant to site?  
*No, it all looks to be in order.*

3.4 Does the content from these two pages look good on screen? Is there too much content? Is it difficult to read?  
*Might be a bit hard to read on the iPad but on the computer it looks good.*

4.0 Would you use the site if it went live?  
*Yes I would Kaylee, it looks very good.*
Manufacturing: Male Age: 24

Industry experience: Manager of Nu-Tank for past five years.

1.0 Navigation & Instruction
1.1 Do you think the site is easy to navigate/find your way around?
   Yes

1.2 Do you know where you have to click to get to desired location?
   Yes

1.3 Can you to find your profile and tell me if it was difficult?
   Yes. No.

1.4 Is there anything you don’t like?
   Not really.

1.5 Is there anything you would like to see added?
   Can I add whatever links I want to the home page or do they have to be links to things on the website?
   I would probably add links to websites I use all the time if I used your site.

2.0 Design and Features.
2.1 Does the design appeal to you – colours, layout, design, images?
   Yes, OK.

2.2 Does it look professional? Like an online tradeshow?
   Yes but you could probably put more ads on it somewhere when you walk into a tradeshow there are sites everywhere.

2.3 Is there anything you don’t like?
   No it’s OK.

2.4 Is there anything you would like to see added?
   A big Nu-Tank logo on the front page.

2.5 Do you think the virtual voucher system VITTO would encourage you to use the site?
   Yes as a customer, from a supplier standpoint – it depends how complicated it is.

3.0 Interface & Content
3.1 is it obvious that you click on buttons to navigate through the site?
   Yes, pretty normal

3.2 You can add events you are interested in or registered to attend to an onsite calendar. Would you use this?
   Maybe, not sure.

3.3 Can you read the content on two pages of the site (just pick two). Is it relevant to site?
   Yes

3.4 Does the content from these two pages look good on screen? Is there to much content? Is it difficult to read?
   No it is fine.

4.0 Would you use the site if it went live?
   Yes, I would definitely give it a go depending on the cost of course.
Mining  

Gender: Female  
Age: 21

Industry experience: GLNG employee for approx. past one and a half years.

1.0 Navigation & Instruction
1.1 Do you think the site is easy to navigate/find your way around?  
*When you tell me what parts of it actually work then I do, yes.*

1.2 Do you know where you have to click to get to desired location?  
*Yes, generally on the picture or words.*

1.3 Can you to find your profile and tell me if it was difficult?  
*Yes I found it, pretty simple really.*

1.4 Is there anything you don’t like?  
*That I don’t know what works. (regarding not all pages working)*

1.5 Is there anything you would like to see added?  
*Does it cost anything to be on it?*

2.0 Design and Features.
2.1 Does the design appeal to you – colours, layout, design, images?  
*Yes, all looks good.*

2.2 Does it look professional? Like an online tradeshow?  
*Professional yes, tradeshow I suppose so? Not really sure what one looks like?*

2.3 Is there anything you don’t like?  
*Should have better looking people in the pictures...Actually you could probably have better photos or picture on the page, those are alright, but you could have done better.*

2.4 Is there anything you would like to see added?  
*Actually now I look again do the messages I send through VITTO come to my email or just back on to VITTO? It would be convenient if I could get message replies to my work email. And can I save event calendar from the website onto my calendar at work?*

2.5 Do you think the virtual voucher system VITTO would encourage you to use the site?  
*Yes, it definitely won’t hurt! Who doesn’t want things cheaper these days. I would probably see how hard it was to earn VITTOS, if it took a lot of effort for a small discount maybe not.*

3.0 Interface & Content
3.1 is it obvious that you click on buttons to navigate through the site?  
*Yes.*

3.2 You can add events you are interested in or registered to attend to an onsite calendar. Would you use this?  
*Yes – as I said before it would be good to add them to work computer as well.*

3.3 Can you read the content on two pages of the site (just pick two). Is it relevant to site?  
*Yes, it tells me about the site I guess.*

3.4 Does the content from these two pages look good on screen? Is there to much content? Is it difficult to read?  
*No, it looks pretty good, you have done a good job.*

4.0 Would you use the site if it went live?  
*Yes would probably have a look at it. I would tell my boss’s about it as well…possibly nag them until they told me they’ll look at it 😊.*
Agriculture: Male Age: 30

Industry experience: Grew up on Cane farm, stopped working one approx. five years ago, although parents still have farm.

1.0 Navigation & Instruction
1.1 Do you think the site is easy to navigate/find your way around?
It wasn’t too hard.

1.2 Do you know where you have to click to get to desired location?
Yes, just click on the headings.

1.3 Can you find your profile and tell me if it was difficult?
Found it, not really, you haven’t really got many options to choose from.

1.4 Is there anything you don’t like?
No, it’s pretty good.

1.5 Is there anything you would like to see added?
No, I don’t think so.

2.0 Design and Features.
2.1 Does the design appeal to you – colours, layout, design, images?
Yeah, doesn’t look too bad.

2.2 Does it look professional? Like an online tradeshow?
Yes, very professional, your booths look like a real tradeshow for sure.

2.3 Is there anything you don’t like?
No, I don’t think so, it looks pretty easy to use.

2.4 Is there anything you would like to see added?
Maybe a page where I can talk to farmers without having to be friends with them, ask questions, give updates, warning [about smut and other cane diseases] that sort of things.

2.5 Do you think the virtual voucher system VITTO would encourage you to use the site?
Probably, getting something for bargain is always good.

3.0 Interface & Content
3.1 Is it obvious that you click on buttons to navigate through the site?
Yes.

3.2 You can add events you are interested in or registered to attend to an onsite calendar. Would you use this?
Yes, probably wouldn’t hurt.

3.3 Can you read the content on two pages of the site (just pick two). Is it relevant to site?
Yes, looks good to me.

3.4 Does the content from these two pages look good on screen? Is there too much content? Is it difficult to read?
No all good.

4.0 Would you use the site if it went live?
Yes, I think I would.
Appendix F VITTOS Details

*VITTOS* are exchanged into a dollar form upon purchasing from a supplier found onsite. *VITTOS* have no value outside *VITTO*. The value of *VITTOS* is:

1vts = 1c.

**VITTOS Scale**

All registered users will earn a standard number of *VITTOS* though various activities onsite listed below:

- Registration with *VITTO* = 100vts
- Referring friends who join *VITTO* = 50vts / friend
- ‘Liking’ or ‘following’ *VITTO* = 50vts
  (Facebook, Twitter & Social Media)
- Advertising *VITTO* personally* = Customised
  (Blog, social media etc.)
- Advertising *VITTO* corporately* = Customised
  (Website, social media etc.)
- Purchasing from supplier found on *VITTO* = 1vts / $ spent
- Leaving feedback = 50vts / purchase
  (On site experience, supplier purchasing experience & supplier rating)
- On site participation* = Customised
  (Surveys, focus groups and other open events)

*Customised agreements will be in effect stating a mutually beneficial terms including number of *VITTOS* gained for various forms of advertising.*
Sellers & VITTOS

All business registered to sell goods and/or services on VITTO will enter into a contractual agreement with VITTO upon registering agreeing to follow the supplier terms and conditions for VITTOS including:

- Supplier provide VITTOS discount to all sales made as a direct result of VITTO.
- Supplier to allocate VITTOS to customers purchasing from them as a direct result of VITTO.
- Suppliers are able to limit the equivalent number of VITTOS used in a transaction to a maximum of 10% of the transaction total. For example if the total transaction costs $20 the supplier is able to limit the number of VITTOS the buyer can use for this purchase to 20vts, as 20vts = $2 =10% of $20.

Upon completion of a transaction exchanging VITTOS the seller simply goes onsite and completes a quick form stating they have made a sale, selecting the customer, selecting the number of VITTOS used as a discount and stating the purchase price so that VITTOS can then be allocated to the buyer.

Users & VITTOS

All registered VITTO users are able to earn VITTOS on site and use these for discounts on purchases made as a direct result of VITTO. The VITTOS terms and conditions are:

- VITTOS balance expires in 365 days of earning them.
- VITTOS are not redeemable for cash or transferable.
- The value of VITTOS may be subjected to change without notice.
- No ‘free’ VITTOS must be allocated or accepted.
• The *VITTOS* scale must be used for the allocation and redemption of *VITTOS*.

• Buyers are able to state how many *VITTOS* they would like to use for a purchase (up to the maximum). They are under no obligation to use all *VITTOS* at any time.

• Users are able to their number of accumulated VITTOS at the top of all screens while the spending and earning history can be viewed in the briefcase section of the site.
### Appendix G Images Used in Prototype

<table>
<thead>
<tr>
<th>Image</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="http://www.flickr.com/photos/olibac/6025300139/sizes/m/in/photostream/" alt="Image" /></td>
<td><a href="http://www.flickr.com/photos/olibac/6025300139/sizes/m/in/photostream/">http://www.flickr.com/photos/olibac/6025300139/sizes/m/in/photostream/</a></td>
</tr>
<tr>
<td><img src="http://www.flickr.com/photos/zooboing/4649039510/sizes/m/in/photostream/" alt="Image" /></td>
<td><a href="http://www.flickr.com/photos/zooboing/4649039510/sizes/m/in/photostream/">http://www.flickr.com/photos/zooboing/4649039510/sizes/m/in/photostream/</a></td>
</tr>
<tr>
<td><img src="http://www.flickr.com/photos/62459458@N08/6517956825/sizes/m/in/photostream/" alt="Image" /></td>
<td><a href="http://www.flickr.com/photos/62459458@N08/6517956825/sizes/m/in/photostream/">http://www.flickr.com/photos/62459458@N08/6517956825/sizes/m/in/photostream/</a></td>
</tr>
<tr>
<td><img src="http://www.flickr.com/photos/revdave/2794506311/sizes/m/in/photostream/" alt="Image" /></td>
<td><a href="http://www.flickr.com/photos/revdave/2794506311/sizes/m/in/photostream/">http://www.flickr.com/photos/revdave/2794506311/sizes/m/in/photostream/</a></td>
</tr>
<tr>
<td><img src="http://www.flickr.com/photos/haldanemartin/4847495314/sizes/m/in/photostream/" alt="Image" /></td>
<td><a href="http://www.flickr.com/photos/haldanemartin/4847495314/sizes/m/in/photostream/">http://www.flickr.com/photos/haldanemartin/4847495314/sizes/m/in/photostream/</a></td>
</tr>
<tr>
<td><img src="http://www.flickr.com/photos/83532250@N06/7650804342/sizes/m/in/photostream/" alt="Image" /></td>
<td><a href="http://www.flickr.com/photos/83532250@N06/7650804342/sizes/m/in/photostream/">http://www.flickr.com/photos/83532250@N06/7650804342/sizes/m/in/photostream/</a></td>
</tr>
<tr>
<td><img src="http://www.123rf.com/photo_5321988_attractive-businesswoman-standing-on-a-white-background.html" alt="Image" /></td>
<td><a href="http://www.123rf.com/photo_5321988_attractive-businesswoman-standing-on-a-white-background.html">http://www.123rf.com/photo_5321988_attractive-businesswoman-standing-on-a-white-background.html</a></td>
</tr>
<tr>
<td><img src="http://www.123rf.com/photo_4634031_the-moon.html" alt="Image" /></td>
<td><a href="http://www.123rf.com/photo_4634031_the-moon.html">http://www.123rf.com/photo_4634031_the-moon.html</a></td>
</tr>
<tr>
<td><img src="http://www.123rf.com/photo_8128329_dump-truck-without-gradients.html" alt="Dump Truck" /></td>
<td><img src="http://www.123rf.com/photo_5275306_tractor--vector.html" alt="Tractor" /></td>
</tr>
<tr>
<td><img src="http://www.123rf.com/photo_11986305_wild-mushrooms-in-forest-setting.html" alt="Mushrooms" /></td>
<td><img src="http://www.123rf.com/photo_4357012_world-stock-exchange-market-4.html" alt="Stock Exchange" /></td>
</tr>
<tr>
<td><img src="http://www.123rf.com/photo_5169076_get-sky.html" alt="Stock Market" /></td>
<td><img src="http://www.123rf.com/photo_11200157_theater-seats.html" alt="Theater Seats" /></td>
</tr>
<tr>
<td><img src="http://www.123rf.com/photo_15123956_one-child-warm-glove-on-a-white-background.html" alt="Image" /></td>
<td><a href="http://www.123rf.com/photo_15123956_one-child-warm-glove-on-a-white-background.html">http://www.123rf.com/photo_15123956_one-child-warm-glove-on-a-white-background.html</a></td>
</tr>
<tr>
<td><img src="http://www.123rf.com/photo_2487137_metal-nuts.html" alt="Image" /></td>
<td><a href="http://www.123rf.com/photo_2487137_metal-nuts.html">http://www.123rf.com/photo_2487137_metal-nuts.html</a></td>
</tr>
</tbody>
</table>