PROJECT PAPER REPORT

DIGITAL TRUST: A CASE STUDY OF ENTERPRISE CONTENT MANAGEMENT

BY

MARIA ABD RAHMAN
M6030914002
SCHOOL OF MANAGEMENT

ASIA E UNIVERSITY
2016

PROJECT PAPER REPORT

DIGITAL TRUST: A CASE STUDY OF ENTERPRISE CONTENT MANAGEMENT

BY

Maria Abd Rahman
M60309140002
SCHOOL OF MANAGEMENT

2016

APPROVAL PAGE

This is to acknowledge that this research paper entitled "Digital Trust: A Case Study of Enterprise Content Management" which is prepared and submitted by Maria Abd Rahman is aligned to the standard requirements for Master in Management course.

.....

Dr Oo Yu Hock

Main Supervisor

ACKNOWLEDGEMENT

Alhamdullilah, I have been blessed with good health and the strength to challenge myself to achieve this great milestone and I would like to acknowledge several people that has made this education journey and enriching one.

I would like to extend my deepest gratitude to my mother; Mdm Zainah Mahmud for her constant duaa'. She has been my biggest support system and for that I am grateful ~ Thank you Ma.

My son, I hope I am a role model to you and to have demonstrated that in this life, don't ever stop learning and pushing yourself beyond your comfort zone. Education is after all, life's passport into the future ~ I love you, Thaqif.

My sincerest thanks goes out to family members and close friends for their constant encouragement and for believing in me when I didn't believe in myself. I am blessed to have all of you in my life ~ you know who you are.

Not forgetting my work supervisors, colleagues, ex-colleagues and mentors; thank you for your support. I know that my career adventure will only get better from here ~ may you be blessed for your kindness.

Last but not least, special thanks to the Faculty of Asia e University, Academic Facilitators, Coordinators and Administration for your patience and guidance. Special mention to Dr Oo Yu Hock whom guided me through three course subjects, who is also my project paper facilitator. Your humour and passion has been inspiring. My sincerest thanks to you Sir.

ABSTRACT

In an era where technology is at the very core of a society, digital archival is the sensible way for organizations to go forward with. We no longer require hardcopy data and documents and by doing away with such hardcopy administration, organizations will save storage space and do-away with the manual tracking of these documents. Digital archival and content management, allows bigger storage, cost-efficiency in managing storage (cloud, data servers, etc) and would be an easier search lookup function when required.

How do organizations do away with hardcopy information and documents? How do they change the mind set and behaviours of the organization and consequently gain "Digital Trust"? This would be the essence and problem statement of my research in my project paper. It is not only the challenge in keeping up to date with technological developments but it is the ability to cope with the changes affecting an organizations eco-system and foster trust for digitization.

In this research paper, I seek to explore the process of data access control, use and ethics and its value creation in enterprise content management. Is it sufficient to legitimise data access or at what level of transparency should an organization allow? The interconnection of these issues and the regulatory response which highlights some challenges that and organization would/is facing. This paper is theorizing a case study that I had experienced and references from academic literatures and white papers that surrounds the topic of digital trust and data privacy regulations and how an organization can better align with their stakeholders' interest and how they can achieve real-time accountability.

TABLE OF CONTENT

Chapter 1

INTRODUCTION

1.1	Background of the Study	2
1.2	Statement of the Problem	2
1.3	Objective of the Study	2
1.4	Research Question	3
1.5	Significance of the Study	3
1.6	Organization of the Project Paper	3
1.7	Research Methodology	4

Chapter 2

REVIEW OF LITERATURE

2.1	Data Ethics and Control	5
2.2	Technology use as A Strategy Practise	8
2.3	Trust Dynamics in Digital World	10
2.4	Opportunities and Risks – Management Challenges	12
2.5	Unified Content Strategy in Enterprise Content Management	16
	2.5.1 Faster time to market	17
	2.5.2 Improved quality of content	17
	2.5.3 Reducing cost	17

Chapter 3

RESEARCH DESIGN AND METHODOLOGY

3.1	What is Enterprise Content Management?	19
3.2	Why is Enterprise Content Management important?	19
3.3	Enterprise Content Management Infrastructure	20

3.3.1 Create and Capture 20

3.3.2 Manage 20

3.3.3 Deliver, Archive and Dispose 20

3.4 Enterprise Content Functionality 20

3.4.1 Create and Capture 20

3.4.2 Manage 22

3.4.3 Deliver, Archive and Dispose 22

3.5 Benefits of Enterprise Content Management 22

3.5.1 Enhanced business continuity 22

3.5.2 Increase employee productivity 23

3.5.3 Reduce storage cost 23

3.5.4 Reducing operating cost 23

3.5.5 Enable faster decision-making 23

3.6 Technology Drivers – Cloud-based tools 24

3.7 Enterprise Content Management Framework 24

3.8 Enterprise Content Management Lifecycle and Timelines 28

3.8.1 Project Planning – Methodologies 28

3.8.2 Approach and Deliverables 29

3.8.3 Implementation

Chapter 4

FINDINGS AND SUMMARY

4.1 Findings and Summary 33

4.1.1 Corporate Performance 34

4.1.2 Policy, Objectives, Procedures and Standards 35

4.1.3 Corporate Image 35

4.1.4 Employee Engagement and Morale 36

4.1.5 Customer Satisfaction 36

4.1.6 Project Success 37

4.2 Analysis 38

4.2.1 Data acquisition responsibilities 38

4.2.2 Data management responsibilities 39

4.2.3 Dissemination responsibilities 39

4.2.4 Disposal responsibilities 39

Chapter 5

RECOMMENDATIONS AND CONCLUSION

5.1 Recommendations 40

5.1.1 Recommended Enterprise Content Management Considerations 40

5.2 Conclusion 44

FIGURES

Figure 1: Elements of Digital Trust – Accenture 8

Figure 2: The New Trust Dynamic – PWC 11

Figure 3: The biggest challenges in responding to digital disruption – KPMG 15

Figure 4: Conceptual Framework of Project Paper 18

Figure 5: Enterprise Content Management Conceptual Architecture 24

Figure 6: Enterprise Content Management Components 28

Figure 7: Enterprise Content Management Lifecycle 29

Figure 8: Data Quality Cycle 31

Figure 9: Enterprise Management Evaluation Results 34

Figure 10: Conceptual Framework of Project Paper – P.I.M.P 44

Chapter 1

INTRODUCTION

"The invention of the ship was also the invention of the shipwreck"

Paul Virilio

Technology creates enormous opportunities and at the same; new risks. Organizations are seeking to make sense and obtain data more than ever before. The ability to tie in data from offline, web sources and mobile enables organizations to retain large data sets and increase the sophistication use of data. The potential for us to be fast and agile is incredible. Our reliance on technology is a fundamental part of organizations. Whilst customers are entrusting their data to a very wide variety of technology platforms and organizations, the trust dynamic between related parties are tested. This would include internal customers, employees.

Individuals trust in organizations to protect their personal data has never been more significant and important. So how would an organization gain this digital trust from its people? Trust means that employees and customers choose to share their personal data and upload it into an organizations' selected technology platform. It means, they have confidence that the system will not fail them and able to keep their data safe and secure. On the other perspective, management is entrusting employees with information and allowing access into the core of their technology platform which if not controlled with the appropriate user access can cause harm to an organization.

1.1 Background of the Study

This project paper, explores the digital trust in a selected organization as it is practised. To retain the privacy and confidentiality of the organization, I shall refer the said organization as *BOLD Cartel*. This paper will explore the factors that influence and efforts the organization take to work towards a more sustainable approach in gaining digital trust and how it relates to the theory and the conceptual framework. As we are aware, it is no longer realistic to prevent personal data from being processed in this internet enabled society. Businesses need to understand the increasing importance of control over data and how to control the use of disclosed data. It has also come to erosion of privacy when it comes to the use of personal data. Understanding digital trust has become a strategic approach.

1.2 Statement of the Problem

The challenge is not in keeping up with the speed of technological changes. It is about how the current design of the organization cope with restoring trust - digital trust. Keeping up to date with technological developments is challenging enough but coping with organizational and technological changes to meet environmental issues arising from the increasing use of electronic data in the form of numerous digitization compositions can be frustratingly stressful.

1.3 Objective of the Study

This study attempts to review the methods of an organization's alternative to retain information and documents from hardcopy to softcopy or digital archival.

1.4 Research Question

How does an organization sustain and continue to improve the Enterprise Content Management in order to enhance digital trust in the storage, retrieval and application of electronic data?

1.5 Significance of the Study

This paper is to review the combination of factors on why organizations choose to engage digitally and trust all parties involved are committed in handling the data and information responsibly and ethically. The magnitude of electronic data is so much larger than paper documents. This is seen by the number of computers used on a day to day in most organizations particularly in the consulting industry. The existence of database and servers gives the ability for information and documents to be stored in terabytes of information with millions of documents. Compared to hardcopies of paper documents, personnel files, notes, memos, letters, articles, ledgers and pictures. The variety of electronic documents type are many when compared to paper documents and in this paper, the discussion is surrounding the efforts in managing the change from paper to electronically stored data.

1.6 Organization of the Project Paper

The chosen organization is headquartered in the United States and have multiple offices across four regions – North America (NA), Latin America (LATAM), Europe and the Middle East (EMEA) and Asia Pacific (ASPAC). To retain the privacy and confidentiality of this organization, I shall refer this

organization as *BOLD Cartel.* This company offers an impressive array of services to its clients particularly in Talent Supply Chain Management solutions. They have been established for almost two decades and has since evolved to keep up with the technological and organizational development whilst keeping abreast with their clients.

1.7 Research Methodology

For the purpose of this research, I have chosen desk research by reviewing journals and white papers relevant to digitization of information and content management and perceptions of digital trust at the same time making most of one's information assets. Comparison with secondary data that on the actual work executed including the metrics that was obtained at point of implementation (case study).

Chapter 2

REVIEW OF LITERATURE

2.1 Data Ethics and Control

Electronic records management is the future of documents archival. This transition has been taking place over the past few years. The President of The United States of America; Barack Obama. Presidential Memorandum – Managing Government Records. *Managing Government Records* retrieved November 28, 2011 from https://www.whitehouse.gov/the-press-office/2011/11/28/presidential-memorandum-managing-government-records directed the government agencies in the U.S to enhance their records information management (RIM) processes. Excerpt from the memo "*Improving records management will improve performance and promote openness and accountability by better documenting agency actions and decisions*". Evidently, the memo emphasized on electronic alternatives. Further continuation to the memo "*Greater reliance on electronic communication and systems has radically increased the volume and diversity of information that agencies must manage. With proper planning, technology can make these records less burdensome to manage and easier to use and share*". There is no doubt that moving from hardcopy document to electronic archival at the scale and size of the Government of the U.S is not something that happens overnight and there are legitimacy of the record keeping procedures that needed to take structure and thought thoroughly which needed to follow the law or guidance from ethics-based principles.

In a white paper published by Norbert Schwieters. Ten Digital Trust Challenges. retrieved December 4, 2015 from http://www.pwc.com/gx/en/issues/trust/ten-digital-trust-challenges.html "*To what extent should data be gathered, analysed and used? The digital revolution has given companies the technologies to collect enormous amounts of data about consumers and employees*". Individuals and public has been slow in realization on the amount of personal information companies have been gathering and using. As more awareness and realization comes in place, the protection of data use and maintaining privacy is pertinent and trust becomes a strategic approach.

So how do organizations get the balance right in data privacy and usage? Would legitimizing data access and analysis be sufficient? What level of transparency should one be allowed? This is where the ethical use of data needs to be addressed and regulated. The benefits and risks of managing data through technology and people need guidelines or references to educate on the management of their technology footprint. Organizations need to determine, their capability and extent of involvement in their information governance strategy. The way to businesses respond to data ethics and control, will influence behaviours which will become a norm which objectively should be exemplary in moral values and standards. Through due time, the bar of trustworthiness will be raised and people in the organization would evolve to adopt a higher ethical standard.

In 2014, after a consumer outcry from its iCloud breach, Apple had the hard realization of the importance of trust. Efforts in transparency securing and the use of customer data is an open testimony to the value on trust. Companies

such as Apple recognizes the significance of trust in the digital economy and in order to compete, push boundaries and offer new services, they need to produce ethical and secure-by-design products.

Accenture's white paper; Digital Trust: Strengthening customer relationships through ethics and security cited from https://www.accenture.com/us-en/insight-digital-data-security. In this paper, they explicitly defined the differences of data ethics and digital ethics.

Data Ethics vs Digital Ethics:

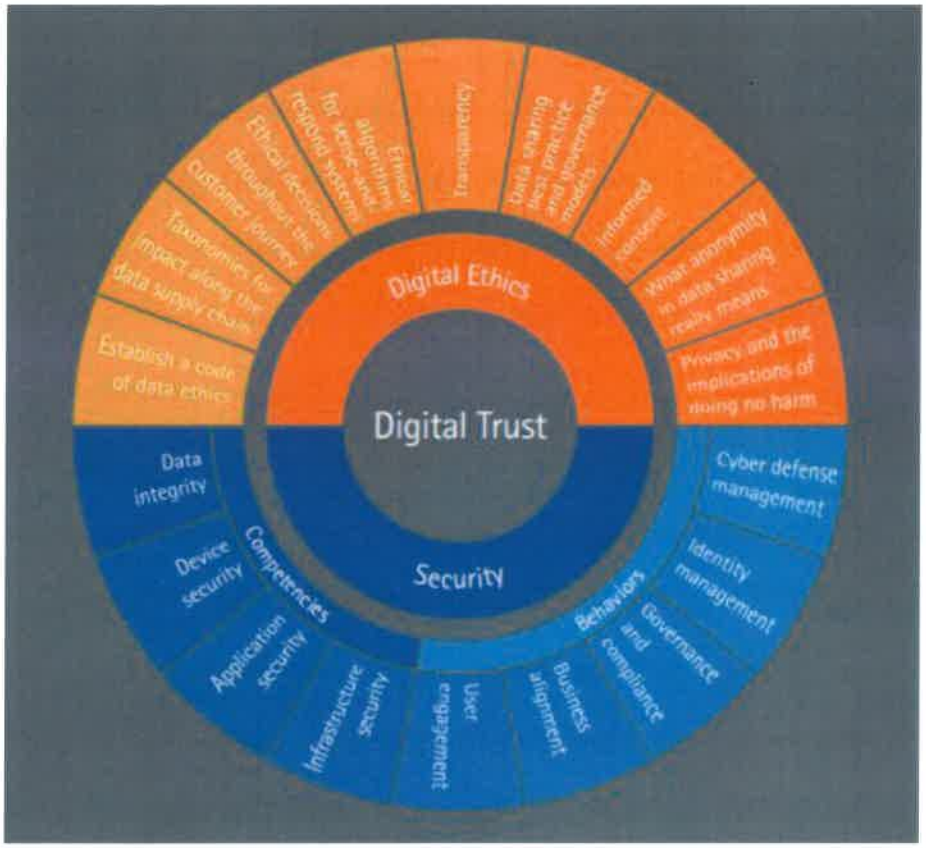
- *Data Ethics: moral governance of the integrity, handling, control and provenance of data.*
- *Digital Ethics: data ethics and moral governance of actions taken as a result of insights derived from the analysis of information (where 'information' is data with context).*

Further in Accenture's research states that *"Over 80 percent of companies are required to comply with data handling protocols that go beyond their internal controls. To account for these intrinsic risks in other parts of a digital business's operations, data ethics—and, more comprehensively, digital ethics—are critical"* (see Figure 1 below).

Trust can erode quite easily and therefore companies need to recognize and create strong ethical controls which takes into consideration cultural variances in human and technological processes. In a survey conducted by Accenture of digital trust "*Eighty-two percent of survey respondents agree that a lack of security and ethical controls on data could exclude them from participating in others' digital platforms and in broader ecosystems—an increasingly critical*

go-to-market strategy". This is affirmation that data ethics and control is the fundamental basis of the digital economy and towards a more sustainable

Figure 1 : Elements of Digital Trust - Accenture



Source: Digital Trust: Strengthening customer relationships through ethics and security, white paper.

approach to personal data use and retention. For change to happen, it requires trust which is not easy to build when technology is involved but rest assured that once trust is built, change comes easy.

2.2 Technology use as A Strategy Practise

Data algorithms play an important role in automating processes and driving decision-making process for better efficiency. Without a doubt, artificial intelligence (AI) is a widely debatable subject on the ability for AI having the

capability to replicate intelligent behaviours of a human. Ethical and trust implications of AI is no doubt a subject that needs further exploration and can possibly be achieved by integrating collaboration between human and machine. Whilst the option on involving AI as an automated process in dealing with ethics governance are being explored, rules and behaviours needs monitoring with regulatory responses. As defined by Aberer and Despotovic (2001), "*Reputation is a measure that is derived from direct or indirect knowledge on earlier interactions of entities and is used to assess the level of trust an entity puts into another entity*".

Denning (1993) iterates the importance of assessment for trust in a system, which is of particular importance in the digital environment. The current paradigm for trusted computing systems holds that trust is a property of a system. It is a property that can be formally modelled, specified, and verified. It can be "designed into" a system using a rigorous design methodology. Trust is an assessment that a person, organization, or object can be counted on to perform according to a given set of standards in some domain of action. In particular, a system is trusted if and only if its users trust it. "*Trust itself is an assessment made by users based on how well the observed behaviour of the system meets their own standards*".

Investments in Information Technology (IT) are truisms and is instrumental to firms' long-term survival. The truth behind these truisms is that IT investments are as far as IT capabilities are embedded in organizational practise (Viktor Arvidsson, Jonny Holmström, Kalle Lyytinen, 2014). Chen et al. (2010) identified three persistent strands within IS strategy research: (1) alignment of information systems with business strategy (e.g.Chan et al., 1997 and Chan and

Reich, 2007); (2) strategic information system planning to identify such portfolios of systems (e.g. Galliers, 2004 and Ward and Peppard, 2002) and (3) the resultant use of specific systems, or their combinations, for competitive advantage (e.g. Melville et al., 2004, Piccoli and Ives, 2005 and Wade and Hulland, 2004). Regardless of which strand is being examined, research assumes that information systems strategy is dependent upon the way it is enacted. It is therefore critical to maintain tight linkages between the firm's strategic intent, the ensuing information systems strategy implementation and the de facto realized strategy.

2.3 Trust Dynamics in Digital World

Digital Trust borrows the trust concept in sociology to indicate that, in distributed computing and communication systems, one party evaluates whether other parties are trusted to perform a certain action or have a certain property. In a study conducted by PWC; Building Digital Trust – The Confidence to take risks, the new trust dynamic: Opportunity + Trust = Growth. By building trust you will be able to maximise your growth potential and manage the risks in the opportunities available in the digital age. (see Figure 2)

IT systems become the core assets of your organization and reliance on technology is significant in the success, so it must not fail. Confidence to succeed in your digital transformation will give exponential effect to your organization's growth. As defined in (Grandison and Sloman, 2000), trust management is concerned with: "*Collecting the information required to make a trust relationship decision; evaluating the criteria related to the trust*

relationship as well as monitoring and revaluating existing trust relationships; and automating the process". Electronic commerce (E-commerce) and services

Figure 2: The New Trust Dynamic - PWC

Source: Building Digital Trust The confidence to take risks, white paper.

are revolutionizing the way we conduct our personal and organizational business. The variable legal frameworks and distrust makes creating the foundation of trust in electronic transaction quite challenging. In European Union (EU) project SECURE, investigated the design of security mechanisms for pervasive computing based on the human notion of trust (Retrieved from https://nlsvr2.ehv.compus.philips.com/). It addresses how entities in unfamiliar pervasive computing environments can overcome initial suspicion to provide secure collaboration (Cahill, V. et al, 2003) Even when the selected system capabilities align with the established strategic intent, however, the system implementation itself often proves another strategic challenge (Markus and

Benjamin, 2003). Although apparent misalignments between strategic intent and system capabilities are evident in several failed strategic information systems implementations (e.g. Pollock and Cornford, 2004 and Wagner and Newell, 2004), it is often the inability to implement the 'strategically aligned' system that causes an information systems strategy process to fail. Successful information systems strategy implementation, however, increasingly implies punctuation (Nolan, 2012 and Ward, 2012) i.e. systematic re-structuring and re-arranging of organizational practices (Henderson and Venkatraman, 1992 and Silva and Hirschheim, 2007)

2.4 Opportunities and Risks – Management Challenges

The opportunity for the reinvention of business models came with the dawn of the digital era. Despite this being great potential, came along with it big risks. Digital enterprise strategy became crucial in its need to prioritize its approach and demonstrate digital maturity. The need for digital governance prevailed for companies operating in regulated markets. So what are the driving factors in data migration and content management? Digital records are dependent on technology for access and use. The configuration and migration of information form one software/hardware to another may be the on going management for continuing access and usability. With this, certain specific measures pushes digital governance in the boardroom. From a study conducted by EY, taken from http://www.ey.com/GL/en/Services/Advisory/EY-why-digital-governance-matters

- **New regulatory requirements demand action**. Governments are racing to catch up with the speed at which the digital world is moving, leading to

new and emerging laws on tax, privacy, data handling and more, with steep fines for failure to comply.

- **Growing cybersecurity risks need to be addressed**. Businesses today have to assume that attacks will occur at some point, and plan accordingly. Added to this, regulators in the US and elsewhere are putting pressure on firms to admit to such breaches publicly.
- **Perceived digital weaknesses can do irreparable damage to brand reputation**. Consumers are becoming increasingly aware that when they bring companies their business, they must also hand over their data. Firms that show themselves as untrustworthy data custodians will face a major loss of brand equity.

In an article written by Aliah D. Wright taken from https://www.shrm.org/resourcesandtools/hr-topics/technology/pages/managing-digital-risk.aspx *"Every organization needs to think about, and be prepared to manage, the risks associated with operating in the digital era—whether social media is part of the organization's strategic agenda or not, speaker Courtney Shelton Hunt, Ph.D., told attendees during her session titled "Managing Risk in the Digital Era" at the 2014 Society for Human Resource Management Annual Conference & Exposition.*

Hunt is founder and principal of The Denovati Group, a digital consultancy.

"A lot of senior leaders don't think about the importance of risk from a digital perspective," she said. "But every organization needs to think about how they're going to manage risk in a digital era." Today, she said, "it's the cost of doing business. It can also be a competitive differentiator, she said, setting "organizations apart from competitors—especially in the war for talent."

"If you keep doing what you always did, you'll get what you always got".
Anonymous

Management have to accept the adaptation of new business model and strategy in times of new developments. Digital transformation is a very powerful thing and it surrounds almost every activity of our daily lives. From the way we buy things to the way we consume entertainment on variable devices. Airbnb and Uber are now changing the hotel and transportation industry and other industries will soon follow suit. The laws of Darwinism (Charles Darwin, 1859) imply that, tomorrow's winners won't be the strongest companies or market leaders but it will be companies that are able to adopt to change faster and better. Therefore, established enterprises will have to evolve rather quickly to stay ahead or they will be at risk of being out-innovated by their peers and competitors. As much as digital disruptions are a threat to business, it is also a huge opportunity for companies that are willing to seize the opportunity. Those that are not willing to embrace the change will soon find it difficult to catch up as technology rapidly advances. KPMG in their white paper, Embracing the Digital Era: what we need is a vision, a structured approach and experimentation taken from http://www.kpmg.com/BE/en/IssuesAndInsights/ArticlesPublications/Documents/Embracing-the-digital-era-Craig-Groza-Houwelingen.pdf (see Figure 3)

Based on Figure 3, it shows that the biggest challenges in digital disruption is not just dealing with technological changes but would also include lack of funding, building new skills or re-skilling existing workforce and limitations in their IT domain. So in conclusion, a structured approach is insufficient. Companies need to collaborate with the eco-system of variable components.

They need to understand where the risks are in disrupting the current business model whilst finding the opportunities that lie within.

Figure 3: Biggest Challenges in Digital Disruption - KPMG

Source: Embracing the Digital Era: what we need is a vision, a structured approach and experimentation, white paper.

Digital businesses will reduce traditional transaction and labour costs while increasing returns to scale aggregated data, quality of digital talent and intellectual property. The scale economies of talent and data comes are decisive and comes with significant cost advantages. In McKinsey Quarterly Articles, Strategic Principles for competing in the digital age retrieved http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/strategic-principles-for-competing-in-the-digital-age there is a crucial need to converge global supply and demand. "*Digital technologies know no borders, and the customer's demand for a unified experience is raising pressure on global companies to standardize offerings*". Companies have to strive to