Context Specific, Networked and Feedback Enhanced eTransformation Business Model

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Abstract: Businesses have been transforming for centuries. Each era of civilisation brought in new innovations and new technologies. Today we find ourselves surrounded by devices, services and applications that in some form utilise technology. Individuals, utilise it to be more productive, groups exchange and manipulate data using it and businesses run their day to day operations. Consequently, technology has been implemented to speed operations, be more reliable and create new revenues. Based on the scenario analysis of five new businesses which utilise transformed renewed business model, this study investigates technology factors that drive new business models and identifies roles that current technological advancements play in shaping the new models. The study highlights that there is a direct relationship between open access technology platforms and current technology trends. Furthermore, this study identifies that for the new business model to be established definition of the specific domain problems and the importance of the access to the resource networks, such as the network of context specific knowledge, either experts, or the individuals with knowledge and skills who can provide timely context specific solutions and network of those who have interest in the specific context domain are paramount for the model to succeed.

1 INTRODUCTION

Business models and operations have been changing and transforming for centuries. New implementations often saw pioneers, however new inventions where not always fully embraced into daily accepted routines immediately. For example, when electricity was discovered, its discovery brought in not just light but fires, disasters and circuit shortages that had detrimental effect in the early days of its use. It is only much after that time that electricity has become a second nature to day to day living.

Similar was noted when Information Technology further advanced from personal productivity tools and storages to more integrated systems and solutions. The innovations were accepted much quicker than those of the electricity, however introductions of new systems to the business environments were not always smooth. 2000 .com crash created a havoc across the globe to a large number of businesses. Sixteen years later businesses are surrounded by the electronic transaction systems, tracking systems, production and operation systems. Our lives today are closely intertwined with the use of the information systems on a daily basis.

However, even though today technology is an integral part of many business operations, its full potentials are still to be fully explored. To understand how technological advancements are currently shaping and impacting new innovative business, a process of business transformation is reviewed. eTransformation takes into the account that businesses should never stand still and that to excel each business needs to go through iterative review, so that they can establish the most suitable resources, objective and performance strategy. (Hol and Ginige, 2011). Therefore, when steam engines were invented factories and transportation began to flourish, when electricity started to be implemented working conditions improved, electricity powered machines started to be used and work became more productive. This was the transformation of business environment and the business models known up to that time.

Today, many changes within business environments can be contributed to the technology changes and improvements. To study eTransformation in detail companies and industries
need to address a change across dimensions Strategy, Structure, Tasks and Processes and Technology.

First, it is essential to take into the account Strategy. It defines company’s direction, aims, objectives, future outlook, expectations and predictions. It is the guiding dimension that assures company stays on the goal pathway. Next Structure is reviewed. It identifies and defines company’s organisational constitution, that can be bureaucratic, hierarchical, linear, networked or ad-hoc – initiated based on a need. After structure is set it is important to define appropriate Tasks and Processes. These are the activities that outline workload, production steps and operations that need to be completed for the products to be delivered to the customers or services provided. Finally, Information Technology Tools and Systems are reviewed. At this point it is important to take into the account, software, hardware, online presence, support systems, management, maintenance, backup and security (Hol and Ginige, 2011).

For the companies to make holistic and successful decisions at each step of the journey, it was identified by Hol in 2014 that eTransformation is not only defined through eTransformation dimensions as earlier thought (Hol and Ginige, 2011) but by also the Domain in which activities are executed as well as the Context which defines a situation in which certain services or products are being sought such as time, place and location (Hol, 2014). Therefore, the Context Specific Framework takes into the account carefully drafted analysis of required knowledge origin, knowledge source essential for the delivery of service or product and conditions under which such products and / or services need to be delivered or provided.

Thus, for the company to be able to successfully transform, it is also essential to understand the Domain Knowledge (Hol, 2014) that specifies data about the industry and in detail defines products and services being offered. Once Domain is understood, it is crucial to gather Context specific data (Hol, 2014) about the customers, markets and identify suitability of the location, time and the scope in which decisions need to be made, so that company operations can continue to seamlessly operate.

This study therefore builds upon Context Specific eTransformation as a base of the investigation and it further reviews:
- the guiding eTransformation models of 2010’s;
- defining characteristics of new model companies;
- parameters that new successful companies that are using technology as a base of their business operation require to take into the account, so they can successfully transform;

2 STUDY DESIGN

To test current Contextual eTransformation Model and identify other characteristics that are impacting emergence of newly eTransformed business model companies and recent start-ups that have transformed existing business models were in-depth analysed.

It was noted that new business models have in recent times been transforming and even pushing the boundaries of the previously known business models. Therefore, the requirement for this study was to select:

- new companies that have so far operated for a minimum of three years;
- have purely been designed on the online platforms where services are not owned by the organisations, providing the services;
- where the organisations purely provides the platform that can be utilised for networking, job posting, expert sourcing, funds exchanges and service and job reviews;

Five companies, namely well-known international companies Skillshare, Airbnb and Uber and two Australian based companies Airtasker and Parkhound were selected for the study. Consequently, for each source supporting data was identified. Next, each case was reviewed, key points summarised and based on those points scenarios created.

Scenarios were analysed, utilising scenario based analysis (Di Giovanni et al, 2012). This allowed for the storyline to be created and based on it most important data extracted, so that characteristics essential to eTransformation and /or new business implementations can be studied in detail.

3 EMERGENCE OF NETWORKED CONTEXT SPECIFIC TRANSFORMATION MODEL

Based on the studied sources, data for each company was collated. Anaylsis was performed to identify:
- main services companies offered
- main benefits companies offered
- outcomes for the customers
- privileges for workers
- main distinguishing characteristics
Table 1: Three Scenarios.

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Technology and Business Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skillshare, 2011 Education (Empson, 2014; Liu, 2015; Tracy, 2016; Walgrove, 2014)</td>
<td>Skillshare business model opens its doors to all to participate. Anyone can teach skills they have and anyone can subscribe to learn. The aim of the company is to assure that those who require a skill in a certain time can easily obtain it. Focus is also placed on real time information and data that is based on real life examples and projects. There are no participation suitability criteria based on prior knowledge or education. Focus is given to social interactions, engagement with other users, both teachers and students. Initially teachers are required to market course to their own network. Only after they have 25 students enrolled and those students are providing satisfying results their courses are advertised.</td>
</tr>
<tr>
<td>Airbnb, 2008 Hospitality (Airbnb 2016a; Airbnb 2016b; Ting, 2016)</td>
<td>Airbnb allows anyone to offer their room, unit or a whole house to people who would like to stay there for a certain time. Stays can range from very short to longer stays. The platform allows registered users to state the service they offer and for those looking for the accommodation to identify suitable locations where to spend time. The service utilises geographical coordinates that allow users to identify exact locations of properties. The system also incorporates fully feedback response where both providers of the service and those who utilise the service provide reviews. This makes service in turn more reliable. Those who gain better ratings in turn become more prone to being offered a service or a place where to stay in the future. A number of legal and security issues are still to be fully resolved.</td>
</tr>
<tr>
<td>Uber, 2009 Transport (ABC News, 2015; Hullinger, 2016; Pullen, 2014)</td>
<td>Uber is a company that offers anyone to get transport from A to B and to act as a driver as long as they meet set criteria, have a car, insurance and drivers licence. The service also does not require users to have a taxi licence. All that is required to be a driver is for the driver to be subscribed to a service, have access to the application and be able to collect passengers that book a vehicles for transport. Both passengers and drivers get rated on their performance which aids credibility. Furthermore, Uber service often costs much less then taxi. It is convenient, easy to track and utilise. Uber model has also risen concerns about security for customers and service providers alike.</td>
</tr>
<tr>
<td>Airtasker, 2012 Multiple industry professionals (Airstriker, 2016, Powell, 2015)</td>
<td>Airtasker allows anyone to post a job and search for people who would be able to complete it. Airtasker utilises a review system that allows both sides service expert and customer to review each other and based on it build a community of respected operators and customers. It is the responsibility of the service provide to ensure that they are able to conduct the work is done by the qualified personnel. Airtasker only provides a technical platform that allows customers and the service providers to meet, communicate, exchange funds and provide reviews.</td>
</tr>
<tr>
<td>Parkhound, 2013 Service – parking (Parkhound, 2016, Dillon, 2014)</td>
<td>Operates very similar to Airbnb. In this case owners advertise their parking spots, carports and garages. This service provides a platform for customers to search for the available parking nearby based on the geographical coordinates. People who have and are at certain times not using their parking spots may advertise them on the site and allow others to rent them for a fee. Fees range based on the type of spot available, security and a location. Spots can be rented for an hour to a month or even longer.</td>
</tr>
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Consequently, stories for each company were drafted. It is important to note, that stories were generated based on the series of available online data.

4 NETWORKED, CONTEXT SPECIFIC ETRANSFORMED BUSINESS MODEL

Based on data collected and reviewed in Table 1, it can be see that there are certain characteristics that
prevail and are crucial for successful business operations.

Considering it was identified that in order for the companies to operate successfully Domain and origin of the problem, the gap or the requirement of the service needs to be known.

Next, it is essential to identify Context, time and place where such problems or services may need to be provided. This also helps define the environment in which company is to interact with its customers and stakeholders.

Following the assessment of the problems, gaps or generally the requirements for services and solutions, it is important to identify specific Context based Knowledge. Such knowledge may come from books, brochures, experts and even those who self-select that they have a particular skill, so that solutions can be smoothly delivered when required.

For the knowledge to be effectively delivered it is essential to ensure that such knowledge is provided for the particular circumstances, in a given time and place for the certain conditions; as it is only valid under those circumstances.

Furthermore, knowledge, or solutions provided or services delivered are then subjected to feedback, where both those offering services as well as those receiving services are able to provide reviews and based on the received reviews their credibility is being measured.

Consequently, a detailed scenario assessment for the five companies is given below, stating characteristics essential at each level of decision making:

**Domain**

Review of Airbnb identifies that the company specialises in renting spare rooms, units and homes and providing accommodation for guests.

Assessment of Uber identifies that they provide service to customers who require transport from one location to the other.

Skillshare allows everyone to promote a course, teach it and learn from the courses others offer.

Airtasker specialises in job advertisements where individuals can post a task or a job and seek for a suitable worker. Employees can also be matched to the roles based on the listed skills.

Finally, Parkhound is similar to Airbnb however it offers parking spots instead of the accommodation. Consequently, each of the five assessed companies is providing a service within the set industries.

**Context**

Based on the Context assessment Airbnb company is in Hospitality sector and it specialises in providing accommodation to people who are looking for a place where to stay for a short period of time. They operate across the world. Based on availability, owners post information and clearly state dates when the property and or room is available. Furthermore, properties are also plotted on the map which allows the users to see exactly where the accommodation is located.

Uber belongs to the industry of Transport. The role of the Uber driver is to provide quick and responsive service based on customer needs and transport them to a certain location. Furthermore, customers are able to identify when and where the cars currently are and based on the map location identify where they could hail the car from.

Skillshare is an Education based company. It allows anyone with a skill to teach and share that skill with those who would like to learn and excel within the field.

Airtasker is a part of the Service industry. The company allows individuals to advertise jobs and to claim jobs creating a network between those who require services and those who can provide them.

Parkhound is Service based Hospitality oriented organisation that offers accommodation for cars. Customers based on their location are able to identify the most suitable place where to park their car.

**Current Knowledge within Domain**

Potential customers of Airbnb are also able identify other accommodation information, including data about hotels.

Potential customers of Uber can also reach the required location by utilising other types of transport-Taxi, public transport or a combination.

Potential customers of Skillshare can search for courses that they would like to study. Often they have a particular goal in mind when selecting courses, however alternatively such skills can be gained via online classes, colleges, universities and industry offered courses.

Airtasker allows for the jobs to be advertised and based on who enquires about them offers them to those with skills to complete them. Airtasker also acts as a recruitment site that matches individuals’ skills to particular jobs. Alternatively customers can also search Yellow pages or trade websites to identify adequate workers or search sites like seek.com.au to identify suitable job adds.

Parkhound offers a unique service that allows customers to find parking nearby usually much cheaper then offered by garages. Alternatively customers may search for parking either on the streets or in garages at the locations near the destination.
Contextual Knowledge - Knowledge specific to problem, time and place

Once Contextual data is reviewed the specific data that potential customers may generate is that possibly staying with Airbnb is much more affordable then for example staying at a hotel, however that staying with Airbnb may be riskier than staying at a hotel. To counteract this scenario new business model integrates a feedback loop.

The contextual data for Uber is similar to that of Airbnb. Uber is quicker to hail and is cheaper in many parts of the world then taxi. However, Uber cars do not necessarily meet the same requirements that taxis are required to meet, their cars are not of a specific fleet and their drivers are not specifically trained. They do provide the service customers require, nevertheless Uber’s safety as well as legal regulations under which they operate are not of the same standard as those of taxis.

Skillshare introduces a very different educational model. It allow everyone regardless of their certification and experiences to teach, share knowledge and learn. It ensures that there are no pre-set barriers to further learning. Therefore, anyone with a particular interest is able to participate and is able to act as a class participant and/or educator. This also allows for the quick, almost ad-hoc, role swap, where one person can be a teacher for one field, and in the other class they may be a student.

Airtasker allows anyone to advertise for jobs and anyone to claim the jobs. This system raises issues of security. Airtasker provides security as the insurance however does not guarantee jobs quality.

Parkhound allows those searching for parking to review places prior to leaving their cars at the location however again provokes issues of safety, standards and security. Parkhound often provides cheaper parking particularly in busy cities when compared to parking stations. Also, it is often easier and quicker to search for the availabilitys, particularly for the longer stays via Parkhound.

Feedback Loop – Knowledge Acceptance and New Knowledge Generation

It can be seen that the Contextual Knowledge within Domain alone is not sufficient. For the system to operate seamlessly three scenarios need to be met. First is the application to real problem. In Airbnb case it is the ability to stay at the identified location and pay for the stay online. Second is the ability to confirm whether in fact a stay like this is seen as safe and whether this option is in fact able to meet the customer’s requirements. Therefore, system implements feedback and rating from both those who stay at locations as well as owners of properties who are able to rate guests. Each in return receive feedback. This process vets the model and also provides a continuous loop that allows for the services to be checked, confirmed and if suitable rated highly, therefore making them more likely choices in the future. If either of the parties receives negative reviews, this acts as a warning sign to new potential guests / owners when accepting them. Therefore, for a healthy system operation, it is essential that both hosts and guests act in accordance to regulations.

Consequently with Uber there is a feedback loop created. Customers who call Uber cars are able to rate drivers and many articles highlight that in fact rating of a driver is the one that carries more waiting then rating of the user. However, as with Airbnb customers of Uber can also be rated which also builds credibility and provides feedback to future drivers.

Parkhound provides a very similar feedback loop for parking places and rates renters and service providers.

Skillshare has a very closely integrated feedback loop. Before a teacher is able to share their skill with general public, they are required to network and share the content with their network circle. Following this they are required to look for adequate marketing avenues. This initial group is a testbed that is acting as a review group to a course offered. Teachers are payed only after they have 25 students, which in fact allows only for the well-developed courses to move ahead, be listed and be open to recruiting new students. Furthermore, teachers can learn from their students and can improve. All teachers and student belong to a network, where they can form new collaborations and partnerships. They can also initiate online discussions, track each other’s progress and when suitable even be able to organise face to face meetings.

Airtasker provides the ability for both customers and those completing jobs to leave feedback. Some work does require certifications, however it is up to customer and the company to assure this is followed as required. Both customers and service providers are rated which also gives reputation to those who are performing well.

5 CONTEXT SPECIFIC, NETWORKED AND FEEDBACK ENHANCED ETRANSFORMATION MODEL

Based on the analysis of the data presented in the section above, it can be see that over the time
business models have been changing and that different innovations and discoveries brought new inventions. Initially computers software applications and user productivity. Next developments sow the rise of web applications and tools that allowed for data exchanges and information systems to be implemented. Next innovation was the invention of applications and social media technologies that is now allowing users to network with their friends, seek for people with same interests provide feedback, answer questions, follow interests and rate those who are performing well.

Therefore, five companies are based on principles defined by social networking that assures communication, technically well integrated platforms, ability to exchange and review data and means to make decisions. Detailed analysis is presented below:

**Open Access to All (Strategy)**
Open access means that all system users can equally participate, their education and/or past experiences and involvements are not at all pre-determining factors of their success. Therefore, anyone can provide service and anyone can seek for a specific service. Initially access to such network is open, however to stay as valued members of the network participants are required to follow certain terms and conditions.

Also, strategy in new model companies needs to take into the account services and products that are to be provided and delivered. Furthermore, it is also important to focus on enabling electronic platforms suitable for data sharing.

**Open Service Platform (Structure, Technology)**
Service and operation are provided via the technology platform. Platform is just a medium via which specific skill / goods can be provided. As it can be seen from the reviews of the five companies, they are all technology based service oriented organisations and have no knowledge of particular trades. They are however designed in a way that attracts customers or people searching for jobs, training or locations to engage. Skills are purely a domain of service / product providers, not the main organisations’ running the business.

**Domain, Context Specific Knowledge Provided (Tasks and Processes)**
This identifies knowledge that is being delivered via credible sources, or from experts themselves. However, for the knowledge to be delivered, following needs to be taken into the account:
- **Context** – the Industry sector, specific time and location or a condition where service and or knowledge is needed. Location, may also be a guiding factor in how solution is being delivered. Furthermore, the organisation may need to deploy parameters required for the technology company to operate seamlessly which forms the first base layer of the company. Second layer allows for the services offered to be mapped, so that the company can attract certain type of customer or providers.
- **Network** - needs to be present. It allows those seeking solutions and/or services to interact. Furthermore, such Network opens doors to sourcing specific Skills or Services. During interaction network participants can learn from one another, can collaborate and can also provide feedback that can lead to future changes and improvements.

![Figure 1: Networked, feedback enhanced eTransformation model.](image-url)
From Fig. 1 it can be seen that there are many domains, however that for a particular knowledge to be sourced Domain Context needs to be defined. Such Context specifies types of products and /or services that need to be provided and / or offered. Following this, it is important to source a network of interested participants. Individual skills within the network domain can range from expert to novice to those that just require services and / or products.

Consequently, data gathered needs to be filtered, so it can meet specific parameters such as time, location and circumstances where certain decisions or services are required. This for example can be done utilising the geographical coordinates to map exactly where opportunities for services are provided, and which providers are closest in proximity and can offer them in a timely manner. Once service is being delivered and requirements of the customer attended to, system has an inbuilt feedback loop that require all participants to provide it.

Feedback helps define quality, remove redundancies and acknowledge those who act in accordance to the requirements. Consequently, a feedback loop creates valued network chains and helps stream traffic in a direction where value is being created (positive reviews). Actors or participants new to the market often are required to spend additional efforts marketing their services, so that they can become a valued node within the network.

Therefore, the system mimics characteristics of the organic system. Such systems source resources for survival from those who can provide them. Its wellbeing or usability depends on a number of people that interact within and across its value networks.

As members of the networks interact they are being rated and their performance acknowledged. Members of networks learn, provide feedback and teach those who require skills.

The only drawback of the network like this is that it corresponds to the “historic cave times” where those who were able to hunt were rewarded (those who provide services) and those who did not get killed (get extracted from the network, either due to not participating or due to not behaving in accordance to regulations).

During “the cave times” there were no legal regulations that were governing operations. Tribe chiefs or the tribes themselves, in the electronic case the followers of specific services or providers, determine future of participants (both those requiring service as customers and those providing services). It is expected however that in the future there will be strictly determined policies and legal regulations that will seamlessly help drive and support electronic network driven exchanges.

6 CONCLUSIONS

In the future it can be noted that there will be many new business models that will be based and delivered purely on a technology platforms. It can be noted that companies as Uber, Airbnb, Skillshare, Airtasker, Parkhound have all been started by technology gurus, not industry experts. None of these companies have experts in hospitality, education, transport, parking nor services.

Inventors in each of the five cases were able to identify a demand in a sector, identify gaps in current services and propose solutions that are helping fill current known operation gaps.

Solutions proposed therefore identify that we live in a networked world, where most working individuals in developed countries are connected 24/7.

Considering, inventors identify that anyone with the skill or resources can for a fee provide a service or deliver a product utilising a technology platform as a medium commonly used for social networking exchanges.

By doing so, they remove any entrance barriers and regulations, strict check procedures and educational pre-requisites. They do however provide certain terms and condition that do cover some insurance.

All five companies’ systems operate organically. They give those who are effective rewards and shame those who are not providing suitable services or behave inappropriately. Consequently, systems run as a semi-open loop, keeping and rewarding those who are performing well, acknowledging new entrants who have reached certain standards and providing negative feedback to those who are not meeting the expectation.

Systems like these are mimicking natural selection. Those who are successful and well supported by their networks are regarded highly, are continuously engaged and are also based on the reviews more likely to be selected by the new entrants. For those with poor ratings it is becoming harder and harder to prove their worth and stay competitive.

Future studies are required to study organically behaving transformed organisational systems. It is expected that future studies will look into how organic systems could become more robust and how in the future they may be able to incorporate stricter
but more streamlined and system embedded check points, user confirmations, qualification checks and more comprehensive global legal regulations and policies, so that systems can automatically warrant security and safety of the network and the participants.

REFERENCES


