

A Research Study On The Degree Of Adaptation To Digital Medium By Organizations

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Abstract: Digital platforms have been of great assistance in shaping and supporting the organizations business processes and customer relationships that were needed to enhance value proposition of the products and services. Digitization often lowers entry barriers, causing long-established boundaries between sectors to tumble. Internet is driving innovation and new opportunities by bringing every object, consumer, and activity into the digital realm. At the same time, businesses are making similar changes within their enterprises by digitizing every process, product, and service. Accenture Technology Vision 2015 Report studies 2000 business across industries and quotes 62 percent are investing in digital technologies, and 35 percent are comprehensively investing in digital as part of their overall business strategy. Penetration of Digitization is impacting the behavior of people and businesses in a profound manner.

The research uses the case study design to analyze the degree of adaptation of the companies to Internet in designing their business models, business processes and operations. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships.

Keywords: Social Media, Digital Media, Digital Platforms, Enterprise, Internet, Digital Marketing Strategy, Virtual Communities, Consumer Behavior, Innovation

I. INTRODUCTION

“Business strategy has always been premised on assumptions about technology, those assumptions are changing, and this will drive us to a different concept of what we mean by business strategy.”– Phillip Evans

Digitization is transforming the industries. Technological advancements are driving changes in economic and political environment and compelling various industries and sectors to constantly innovate. Internet has digged in into every section of society, from purchasing a car to buying items of daily need, from booking a movie ticket to ordering pizza, the processes have changed. Therefore there is a need to unveil. Enterprises, which have built their business models, business processes and business operations many years back, are failing to meet this generation's needs and expectations. To cope up with the market structure alterations in business models are required.

Surprisingly the government sector is also adapting to technological advancement. Digital India program by Prime Minister of India – Mr. Narendra Modi was a perfect example of the same with the aim to transform the nation into a digitally empowered society and knowledge economy. As part of the Digital India campaign, the provision of Digital Infrastructure is a core utility for every Indian Citizen. Internet is leveraging the power to work efficiently and effectively, it assists organizations in calculating and responding to changes, and assisting the young budding entrepreneurs to transform the knowledge and power of Digital Media to manage their ventures. Indian Government is also pushing really hard for many of the upcoming projects such as Smart Cities, Skill India to improve the efficiency and engagement levels of its people.

Nations, corporates, retail, manufacturing, IT to name a few sectors and industries are turning digital to leverage the opportunities. Digital transformation faces a lot of challenges and barriers in real world situations. Many early adopters have

found that digitization is more than just a change of tools. According to a recent Harvard Business Review article "A company must embrace a new culture and mindset, where hierarchy fades and innovation happens through networks."

Enterprises are turning social, the businesses and industrial processes are at a shift point. The inflexible businesses are losing upon the opportunity to emerge as an advanced social enterprise. The need of the hour is to stretch your boundaries in this digital era. The established enterprises and start-ups have realized the implications of tapping into the digital ecosystem which is about re-shaping the markets.

A recent study by IDC in 2016 predicted that the Global Digital transformation spend will cross 2\$ billion by 2019 as companies vision to make better use of information available to customers, markets and products. The report says "Enterprises are forecast to invest the most (nearly half the worldwide total in 2019) on Digital Transformation Technologies that support operating model innovations." Henceforth the business strategists across industries need to relate that Digital Transformation is a requirement and not just a trend.

II. BUSINESSES TURNING DIGITIZED: EMBRACING TECHNOLOGIES

Why? The relation between innovation and technologies has been in discussion from long ago and has been adopted by several organizations (Melville, et al., 2004) (Davenport & Short, 1990) (Chae, et al., 2014) There are several studies conducted previously on businesses undergoing digital transformations like operational flexibility, business process improvement, innovation, profitability etc. (Karimi, et al., 2007) (Srivardhana & Pawloski, 2007) (Romero, et al., 2010); and (Staehr, et al., 2012). As the organizations are stepping into the 21st century a plethora of technological applications – mobile computing, cloud computing, social media referred to as Digital Platforms are coming into play. (Nambisan, 2013) (Yoo, et al., 2012) (Harris, et al., 2012).

Businesses have no choice but to adapt to these technologies to cope up in this super connected world. As the digital ecosystem is advancing, the components of the ecosystem are also strengthening. Suppliers and providers of tools, techniques, and software are increasing. (Adomavicius, et al., 2008) Also, it is rightly said if the process of digitization is incorporated into the system cost effectively and the employees are well trained on its working it triggers innovation. (Cea, et al., 2014) (Niina, et al., 2009)

With the upcoming digital transformation, the operational processes have altered. The customer buying process has undergone a paradigm shift. 89 percent of business leaders surveyed by Gartner believe that customer experience will be their primary basis for competition by 2016. Henceforth, there is an evident change in the IT landscape of several organizations (Schaller, 1997). The upgraded versions of technology have become the base of innovation in organizations – may be it be the new entrants or the well established firms (Lusch & Nambisan, 2014). The technology has advanced to a level where it gives option to companies to

either upgrade or integrate/synchronize the new version with the current system (Lee, et al., 2003).

Maintaining the IT Infrastructure of the organizations and the competitive information systems is required for the effective operational efficiency and improved organizations capability (Luo, et al., 2012). The financial resources are primarily responsible for delivering a superior Digital Transformation experience (Davenport, 2000). The key to innovation is using the right technology and the Best Metrics to drive the success. The mantra is "Digital is here, and it is here to stay". There are several studies that have been conducted on role of technology and innovation (Johannessen, 1994) (Bengtsson & Ågerfalk, 2011). Crossan and Apaydin defined innovation as "production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems" (Crossan & Apaydin, 2010). Digital Platforms are an important phase of technological aspect triggering innovation (Kirilenko & Lo, 2013). There are lot of studies available in the literature portraying the impact of digital platforms influencing the organizational processes and innovation (Sambamurthy, et al., 2003) (Kohli & Grover, 2008) (Nevo & Wade, 2010). Digital transformations also focusses on making business operations more responsive and effective by leveraging the partners, assets, people and digitally connected products.

III. RESEARCH METHODOLOGY

The paper focusses on understanding how the traditional organizations and the digital entrants are working upon on transforming their business processes to digital. What is the level of degree of adaptation to digital media by the already established firms and the new start-ups? The research is focused on what is required to extend the vision in improving the performance by involving the technology and how digital technology is changing the business. The study investigates the case study of 4 Indian organizations – 2 of which have just entered the market space and two of the well-established firm which has transformed their processes from traditional working model to digital. The case study aims to explore the degree of digital transformation by these organizations.

The case study is prepared by in-depth interview of the owners and the top management executives of the firm in phase 1 and interviews of IT and technology leaders in the second phase to get a balanced perspective of the approach adopted towards Digital Transformation.

CASE 1 - DINEOUT: ONE STOP SOLUTION FOR EVERY DINER

A perfect example of any Bollywood movie is the storyline of Dineout. 4 people in 4 different parts of the world, some on land, and one on sea joined hands to form Dineout. Dineout is an online table booking website that offers you multiple services like discounts, deals, events and reviews of the restaurants. As Vivek Kapoor (Co-founder) explains, the

vision is to become a one stop solution for a diner looking to have a great time and a good experience.

Infrastructure – Physical or Online; the question was debatable. The company had to alter the mindsets of Indian Customers who were so used to picking up phones and dialing to restaurants directly and booking a table. It was a challenging task to make the Indian audience believe in a concept where there were numerous other ways to connect. That is when dineout created an infrastructure in a way that enables its customers to reach the Dineout guys the way that suits them the most. A Diner now has an option to make a booking in a restaurant through dineout - online, Whatsapp, Hike, Facebook, Instagram, Website, Mobile App and even calling on the desk. Fighting against the challenge has worked well for the company, the online booking accounts for 66% of their traffic in this day. (Appendix 1)

Ankit Mehrortra the co-founder of Dineout quotes “I believe in the power of technology, it has helped us in improving our processes and understanding customer pattern. I have an open school of thought for any kind of technology upgrade or digital transformation for our venture” After being acquired by the Times Group the company has shifted from the traditional processing to ERP. All the departments from Marketing & Sales, Finance, Customer Service, Feedback, and Employee Hiring is now intertwined and interlinked which is working really well for the organization. The technology change is challenging since extensive training to the employees is required and lot of time and money gets into it; but the after effects are impressive and worth every effort.

The marketing team has been working extensively on effective online presence of Dineout. The team is also working in implementing social media and mobile marketing capabilities to increase the customer base. The IT team proposes that they are working on integration with other similar websites that reviews restaurants. Any customer reviewing on any other site like tripadvisor the reviews will automatically be seen on dineout. They are working on bringing the content onto their own website. The customers feel these reviews as a tool for correct assessment and are more inclined and compelled towards it compared to the internally generated data.

In conversation with Sahil Jain (Co-founder) it was justified that forming a start-up is not a cakewalk. It depresses you, demotivates you, breaks you; it is like climbing a mountain, closer you reach and farther is the peak. Hard times fly and while working you feel there are fewer hours in a day. He quotes “I completely believe the key to any successful venture is the two Ts, technology and team. Get your hand on both and your dream will come true”.

To advance, Dineout has recently hired an employee as Head of Technology. “Most of our funds and energies are being put into developing technology and software solutions for our restaurants. We are coming up with an Electronic Reservation Book. This is going to totally automate reservation system in our partner restaurants. This will help them with tapping database, customer feedback, email/sms marketing, table management etc.” says Vivek Kapoor.

Dineout is open to any kind of digital transformation. From marketing on internet (Appendix1) to presence on mobile apps to automating the processes, Dineout is inclined

towards technology in its every aspect and is further looking forward to any technological advancement. At the same time, Dineout believes that increased involvement of technology is also an equal threatening state as there are competitors with equal opportunities who can artfully get in between companies and the customers and gradually weaken the process chains.

CASE 2 - OYO ROOMS: REINVENTING HOTEL DISTRIBUTION

A new entrant of 2013 in the market, OYO Rooms is flooded with 126\$ million of funding; Ritesh Agarwal a 22 year old young brat behind the idea. Oyo rooms surprises us with its success stories. The case talks about the ideas, strategies, and Role of technology and digitization behind the successful innovation.

Ritesh believes the country India is full of young entrepreneurs. Every student sitting in an MBA class has a thought a fruitful idea growing in his/her mind, the only gap is execution. Oyo Room is one of those ideas backed with technology and standardization. The concept behind Oyo room is very simple; it provides you with a platform to book decent room to stay instantly. It is as simple as 3 steps, download app, choose locality, select hotel and here you go. It deprives its customers of the pain of calling hotel receptions waiting for minutes on call to know the availability negotiating with the sales personnel for hours and then making numerous calls to reconfirm the bookings.

The business model ensures certain facilities (e.g. shower, clean linen, Air Conditioner, LCD etc.) in the Value for Money Hotels. Oyo team ensures auditing on certain parameters, and then only invites the Hotels on its panel. The range of Hotels varies from Guesthouses, Bed and Breakfast, Budget Hotels, Homestay, Villas and even Apartments. A 3 year old idea in the Market has impressed hoteliers to an extent helping Ritesh to acquire 4000 Hotels in 118 cities.

Abhinav Sinha (COO) quotes “The hotels have to incur a cost to standardise the property and bring it up to the OYO mark. Only after that they become eligible to be part of our platform. The deal with the owners is that we drive business to them through our strong marketing channels and take a cut at the topline. Our share is in the range of 25 to 30 per cent, depending on the stage of the business and evolution of the CRM.” (In interview with Business Standard Magazine, 2015)

The idea behind marketing of the site was initially through Television as conveyed by Abhinav Sinha, COO of Oyo Rooms since Television has a reach and the brand is in a phase where it has to stand out. BoringBrands ran campaigns for Oyo rooms on TV for 3 months but since this media was not enough; to spread to wider population, parallel campaigns were run on digital media - YouTube, Twitter, Instagram and Facebook; YouTube and Facebook being the most dominant platforms. (Appendix 3)

Role of Technology – Oyo Rooms is a technology driven chain in it. Digitization has been immensely supportive, it has been the backbone of Oyo Room’s working model. From process orientation, integration to standardization, technological advancements have played a crucial role. The marketing of the site being a new entrant was also focused on digital platforms as they have the potential to trigger

innovation. Ritesh believes in coming 10 years the fight between distributors and brands will end, and the companies will be launched which are on Internet first, same will be followed by the brands. Henceforth, in this competitive environment any digital transformation for any business is an opportunity where synergies can be unlocked and rest ensures the growth of the business ecosystem.

CASE 3 - ASIAN PAINTS: 70 YEARS OF INNOVATION IN PAINT

Established in the year 1942, Asian Paints is one of the India's biggest and Asia's third largest paint company with a wider presence across 19 countries with a turnover of around Rs 150 billion. What more would a company need when it has spread its foot all over, have a loyal customer base. What is the need for digital transformation or innovation in such an organization?

The answer is the Internet landscape is evolving. Digital transformation is imperative for the growth and success of the business. Traditional business models will soon turn obsolete. The requirement is to be visionary and pursue actions. The organization has undergone process change step by step. In the early 2000s the company altered their physical department model to an advanced enterprise wise ERP. It resulted in increased internal efficiency and reduction of debt. The technological upgrade has assisted organizations in improvement of sales and customer responses. (Appendix 2)

By incorporating the ERP, the automated process helped the organization in effectively managing their vendors; inter department interactions, employee engagement and sales activities. Moving ahead with the technology in 2003 Asian Paints also incorporated CRM into the system. In 2010, Asian Paints moved ahead with centralizing their order taking process. The companies aim was to reduce the commissions paying to the distributors and the local vendors which was actually a large share of the company's capital. The centralization process has been supportive to Asian Paints in gaining operational efficiency and improved sales.

The company has been working on automating its process design in context to its manufacturing unit. It will lead to higher scalability, improved quality and safety lines. The incorporated ERP system links the manufacturing unit, sales system of the call center, and the supply chain logistics. This has given opportunity to the sales personnel in understanding the consumer's demand. They have grown to selling a painted wall from a can of Asian Paint.

Mr. Manish Choksi, CIO and Chief of Strategy quotes "We have enjoyed great equity with the business because we have delivered solutions. But seeing so many projects coming at us, we felt that now we need to establish processes to match expectations and resources whilst taking on innovative projects". Asian Paints corporate growth and technological investments along with the employee's involvement and adaptation to IT skills served as a base for Digital Transformation of the organization.

Asian Paints on its webpage now displays its presence and followers on various digital platforms – Instagram, YouTube, Pinterest, Facebook, Twitter, Google+ etc.

CASE 4 – MARUTI: EXPERIENCE TRANSFORMATION IN MOTION

The organization was formed in 1982 with a vision to provide customer delight by creating value through innovation, quality, creativity, partnerships, openness and learning. Today, Maruti Suzuki alone makes 1.5 million family cars every year. That's one car every 12 seconds. With such a tremendous growth and production the company still was facing challenges as lot of competitors – Honda, Mahindra, Hyundai were entering into the space. The companies had come up with technological advancements where Maruti was still lacking behind.

In conversation with Mr. Rajesh Uppal (Chief General Manager and CIO of Maruti Suzuki), Maruti has worked upon bringing together its consulting, digital strategy and technology experts to reengineer the operational business processes. Acceptance towards technology has been a very strong area in Maruti always. From last few years there workflow has been digitized across systems. The automation at the manufacturing end has also been incorporated in the working model. The digital transformation programme has helped them returning back to the market with some new models – Baleno, Ciaz, Vitara, Celerio which have brought a good return on investment for the company.

Technology is now enabler of business innovation for Maruti moving away from just the operations and delivery. Digitization has been of assistance to the organization in forming strategies. The team at Maruti Suzuki understands the fact that digitization is helping the business. Marketers have this opportunity to reach their customers in innovative ways through presence on digital mediums which is way different from the traditional approach. Focus on digitization has been tremendous in recent years which have worked as a big differentiator for the company.

Maruti Udyog's IT infrastructure and applications has always been the focus of company's strategy. The IT team at Maruti has numerous firsts to its credit including MS Exchange, a SharePoint portal, a vehicle tracking system, and a hosted dealer management system. The management at Maruti believes technology is the key enabler of businesses.

ANALYSIS

On interviewing with the personnel from the respective organizations, it was certain that companies are gradually undergoing digital transformation; the degree of adaptation varies from partially to wholly. The naive are coming up with more advanced technologies and have nearly established their foot in the digital landscape. On the contrary, the well established firms are facing comparatively more pressure in coming up with the new technologies. The pressure is more at the operational front than the marketing end. Thus, in a broader aspect some organizations are transforming partly the processes and some wholly. Challenges are still persistent in the market space to accept the efforts required for the up gradation of technology in comparison to the already running process.

The figure shows clear pattern and trends that are generally adopted by companies extracted from in depth

interview of the employees of respective organizations. The broad classification is based on two perspectives – Customer Oriented and Operational. From the customer's end the sub categories on which the interview was focused include - Wider Presence, Enhanced Reach, and Understanding Customer. Taking into consideration, the operational perspective the sub heads that were evaluated include – Ease in process, Pressure to adapt, and Integration.

Within the two pillars, the six elements were changing their pattern and dependency percentage based on whether the organization is a New Digital Entrant or a well-established firm. The dependency percentage was categorized based on 75% transformation (since none of the organization which were interviewed has undergone complete transformation), part transformation i.e. 50%, still working on digital transformation i.e. 25%. There were several factors like industry of the organization, previous operational models etc. which affected the working and digital transformation. The particular research has considered the effect of these moderating factors to be nil. (Figure1)

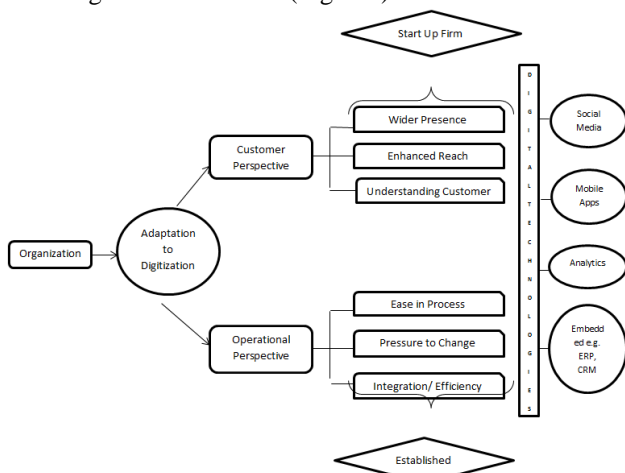


Figure 1: Model to Understand Adaptation to Digitization by Organizations from Customer & Operational Perspective

The in depth interviews with the executives and the founders of the organizations from the different segments showed that the management decisions along with the upgraded technologies are equally important.

- ✓ On one hand the dot com industries – Oyo rooms and Dineout faced different challenges in digitizing the processes, the pressure to adapt was lesser as the employees were already trained on the software. As long as marketing is concerned they started their initial phase of marketing by extending their presence on digital space.
- ✓ On the contrary the other two well established firms – Asian Paints and Maruti had to face a paradigm shift in automating the digital process in the working business model and training the employees. Similar challenge though on a lesser scale was experienced in launching their advertisements on online platforms. Since the companies had a wider audience base and had established themselves it was an additional marketing benefit that came through the digital transformation process. (Table1) The other table (Table2) illustrates the percentage of Digital Technologies adopted by organizations from customer and operational perspectives. The Percentages

were calculated by quantifying the statements of the personal interviews if the four organizations (Appendix 4).

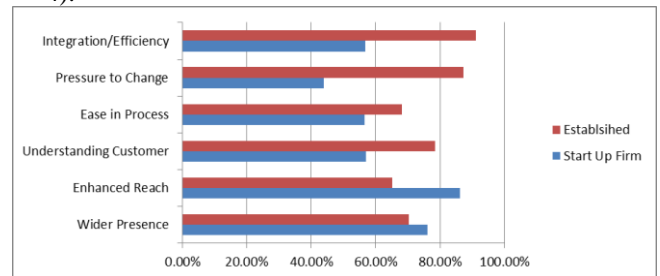


Table 1: % Adaptation to Digitization by Organizations

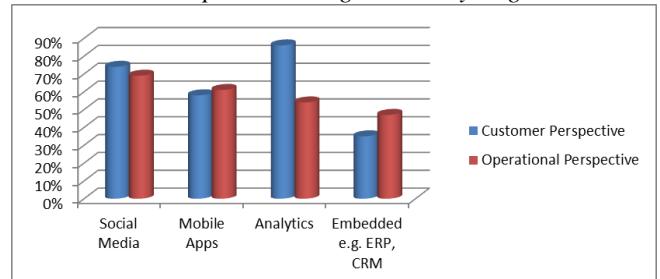


Table 2: % Involvement of Digital Technologies adopted by the Organizations

IV. CONCLUSION

In this era of 21st century, where on one hand we hear stories of organizations reaching great heights adopting new technologies and incorporating IT skills, there are numerous other companies which have lost their presence in the market - Kodak, Nokia, Orkut, Reliance Phones, Siemens to name a few and are only present as business school case studies now.

The scenario is like an intense competition for the survival of the Fittest. The organizations adapting appropriate strategy and technological up gradation in this advanced ecosystem will only survive in the future. There are stories of successful entrepreneurial ventures like Snapdeal, Ola, Justdial, Policybazaar and so on but the bitter truth is the companies are running into losses. The thriving figures are seen because of the venture capitalist firms investing in these organizations. The question is what if the organizations are not able to raise funds? What is Plan B if the cash inflow stops? The answer is "Right Technology and Right Strategy". Technology is the key initiator to innovation and it is the need of the hour that organizations start adapting to robust technological advancements to cope up with the market standards (Figure2). It should also be noted that not every key fits into every lock. Hence, every enterprise should adapt the right technology customized as per their business demand.

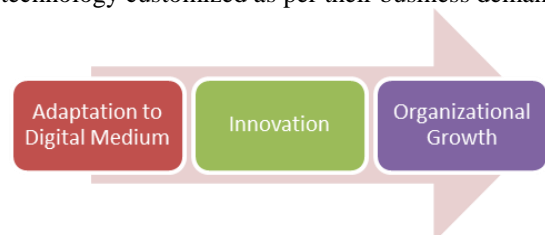
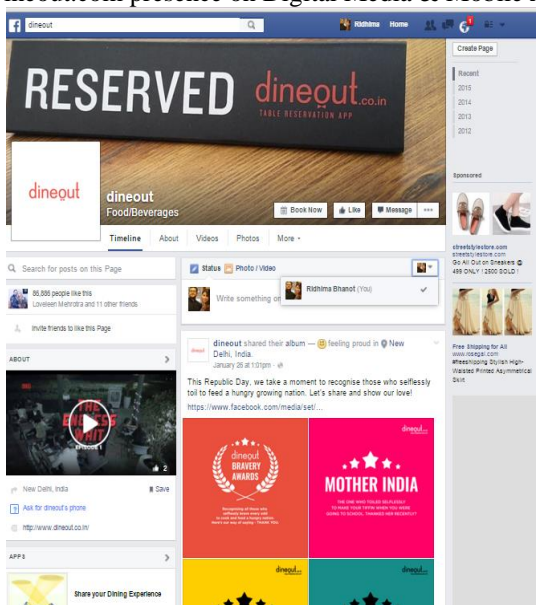


Figure 2: Relation between Digital Transformation, Innovation and Growth

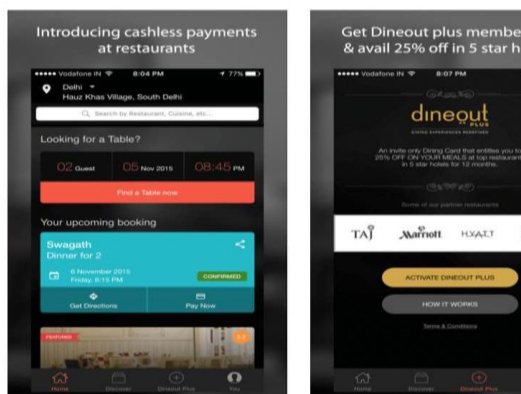
Such strategic technological advancements at varied levels of an enterprise are extremely useful in successful running of an organization and to possess a fairly decent market share in the pie graph of the respective industry. A perfect example to quote is Accenture Vision 2016 which says "People First". Accenture believes that it is the time for a fundamental shift in how businesses apply key technology innovations. Business leaders need to take a new perspective to empower the trends. Accenture announces its Technology Vision every year as per the business standards. The companies will be able to sustain their long term success if they focus on technology as a crucial touch point and look for its effective management.

APPENDIX 1

Dineout.com presence on Digital Media & Mobile Apps



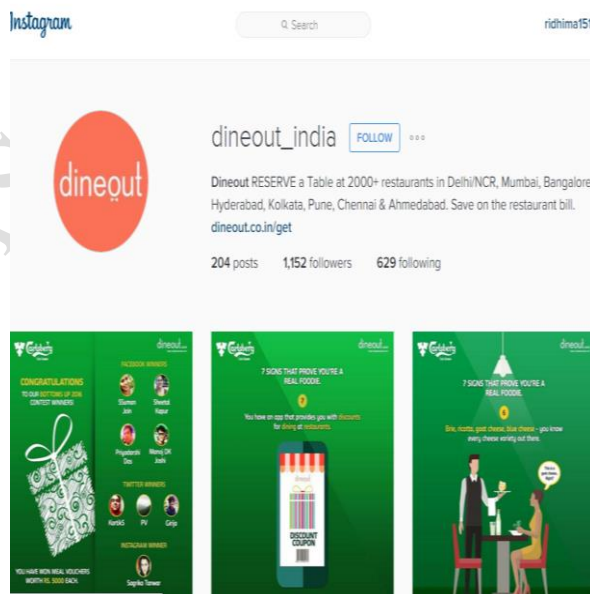
1.1 Dineout Facebook Wall



1.2 Dineout Mobile App



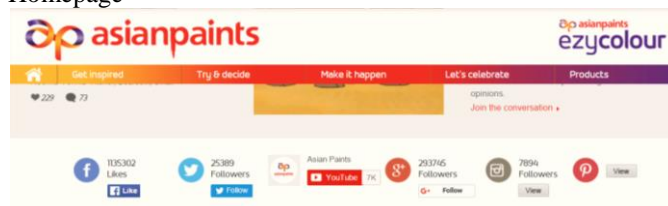
1.3 @Dineout Twitter Handle



1.4 #Dineout Instagram Page

APPENDIX 2

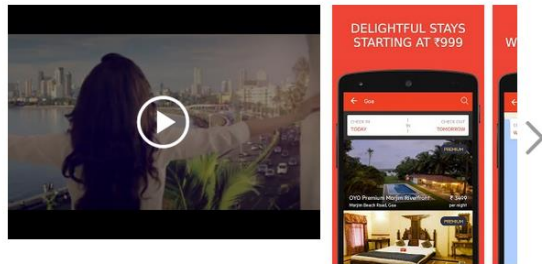
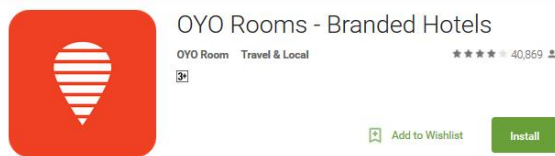
Asian Paints promoting its Media Presence on its Homepage



Asian Paints integrating its Digital Media Presence: Campaign to acquire more customer base

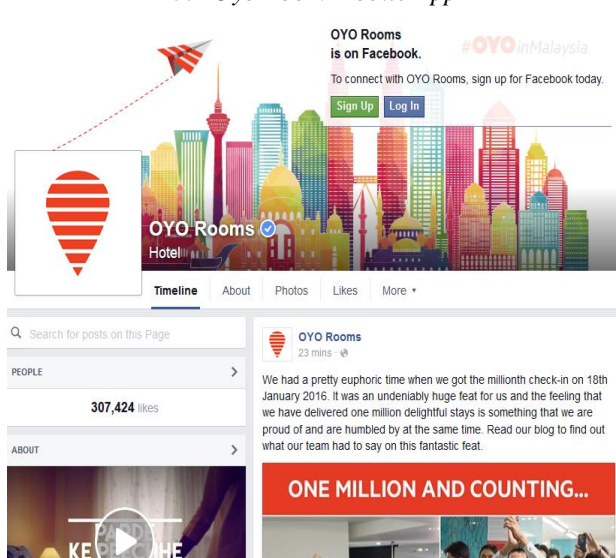
APPENDIX 3

Oyo Rooms in Media



Make finding hotel rooms hassle-free and fun with the OYO Rooms App. The app developed by India's largest branded network of hotels allows you to book a hotel room in a matter of just five seconds. Be spoilt for choice as you can find over 30,000 rooms across 150+ cities in India listed on the app. This superhero app lets you book accommodations, order beverages, arrange cabs and pay for your

3.1 Oyo Room Mobile App



3.2 Promoting 3 million Likes on Facebook

APPENDIX 4

The Appendix 4 illustrates some of the statements during Interviews with the Personnel from varied organizations. The major discussions were how digital transformations assisted organizations in innovating their processes. What is the level of degree of adaptation to digital mediums by organizations?

Digital Medium in Running Operational Processes

Theme	Statements
Digital Medium in Running Operational Processes (Weill & Vitale, 1999) (Ray, et al., 2005)	<ul style="list-style-type: none"> ✓ Operational processes are running smoothly without much issues ✓ The adopted embedded technologies (ERP, CRM) are appropriately supporting the requirements of the business. ✓ The processes are regularly updated as per the requirements

	<ul style="list-style-type: none"> ✓ The employees are trained at regular intervals for efficient results. ✓ Digital platforms are of great assistance in marketing. ✓ Help us in supplementing existing business processes and functioning.
Digital Medium Adaptation from Customer Perspective (Rai & Tang, 2010)	<ul style="list-style-type: none"> ✓ Analytics through digital mediums enables us to discover additional needs of our customers (and potential customers) ✓ Ability to use the same platforms for multiple purposes. ✓ Has been in enhancing our reach to the customers ✓ The digital space is been of great help in widening our space ✓ The marketing budget has gone down as compared to traditional mediums.

Table 1

The statements were then quantified using the standard Likert scale of 1 to 5, depending on the observation to calculate the percentages of dependency by organizations on various digital platforms from the perspective of customer and operational efficiency.

REFERENCES

- [1] Adomavicious, G., Bockstedt, J. C., Gupta, A. & Kauffman, R. J., 2008. Making sense of technology trends in the information technology landscape: A design science approach. *MIS Quarterly*, 32(4), pp. 779-809.
- [2] Bengtsson, F. & Ågerfalk, P. J., 2011. Information technology as a change actant in sustainability innovation: Insights from Uppsala. *The Journal of Strategic Information Systems*, 20(1), pp. 96-112.
- [3] Cea, D. et al., 2014. *Towards the cloudification of the social networks analytics*. s.l.:Springer.
- [4] Chae, H. C., Koh, C. E. & Prybutok, V. R., 2014. Information technology capability and firm performance: contradictory findings and their possible causes. *MIS Quarterly*, 38(1), pp. 305-326.
- [5] Crossan, M. M. & Apaydin, M., 2010. A multi-dimensional framework of organizational innovation: A systematic review of the literature. *Journal of Management Studies*, 47(6), pp. 1154-1191.
- [6] Davenport, T. H., 2000. The Future of Enterprise System-Enabled Organizations. *Information Systems Frontiers*, 2(2), pp. 163-180.
- [7] Davenport, T. H. & Short, J. E., 1990. The new industrial engineering: information technology and business process redesign. *Sloan Management Review*, 31(4), pp. 11-27.

- [8] Harris, J., Ives, B. & Junglas, I., 2012. IT consumerization: when gadgets turn into enterprise IT tools. *MIS Quarterly Executive*, 11(3), pp. 99-112.
- [9] Johannessen, J. A., 1994. Information Technology and Innovation: identifying critical innovation factors. *Information Management & Computer Security*, 2(2), pp. 4-9.
- [10] Karimi, J., Somers, T. M. & Bhattacharjee, A., 2007. The impact of ERP implementation on business process outcomes: a factor-based study. *Journal of Management Information Systems*, 24(1), pp. 101-134.
- [11] Kirilenko, A. A. & Lo, A. W., 2013. Moore's Law versus Murphy's Law: Algorithmic Trading and Its Discontents. *The Journal of Economic Perspectives*, 27(2), pp. 51-72.
- [12] Kohli, R. & Grover, V., 2008. Business Value of IT: An Essay on Expanding Research Directions to Keep up with the Times. *Journal of the Association for Information Systems*, 9(1), pp. 23-39.
- [13] Lee, J., Siau, K. & Hong, S., 2003. Enterprise Integration with ERP and EAI. *Communications of the ACM*, 46(2), pp. 54-60.
- [14] Luo, J., Fan, M. & Zhang, H., 2012. Information technology and organizational capabilities: a longitudinal study of the apparel industry. *Decision Support Systems*, 53(1), pp. 186-194.
- [15] Lusch, R. F. & Nambisan, S., 2014. Service innovation: A Service-Dominant (SD) logic perspective. *MIS Quarterly*, 39(1), pp. 155-175.
- [16] Melville, N., Kraemer, K. & Gurbaxami, V., 2004. *Information Technology and Organizational Performance: An Integrative Model of IT Business Value.*, Volume 28, Issue 2: MIS Quarterly.
- [17] Nambisan, S., 2013. Information Technology and Product/Service Innovation: A Brief Assessment and Some Suggestions for Future Research. *Journal of the Association for Information Systems*, 14(4), pp. 215-226.
- [18] Nevo, S. & Wade, M. R., 2010. The formation and value of it-enabled resources: Antecedents and consequences of synergistic relationships. *MIS Quarterly*, 34(1), p. 163-183.
- [19] Niina, M., Matti, R., Virpi, K. T. & Ansi, O., 2009. The Case of Mobile Ticketing. *Information and Management*, 46(3), pp. 190-195.
- [20] Rai, A. & Tang, X., 2010. Leveraging IT Capabilities and Competitive Process Capabilities for the Management of Interorganizational Relationship Portfolios. *Information Systems Research*, 21(3), pp. 516-570.
- [21] Ray, G., Muhanna, W. A. & Barney, J. B., 2005. Information technology and the performance of the customer service process: a resource-based analysis. *MIS Quarterly*, 29(4), pp. 625-652.
- [22] Romero, J. A., Menon, N., Banker, R. D. & Anderson, M., 2010. ERP: Drilling for Profit in the Oil and Gas Industry. *Communications of the Association for Computing Machinery*, 53(7), pp. 118-121.
- [23] Sambamurthy, V., Bharadwaj, A. & Grover, V., 2003. Shaping agility through digital options: Reconceptualizing the role of information technology in contemporary firms. *MIS Quarterly*, 27(2), pp. 237-263.
- [24] Schaller, R. R., 1997. Moore's law: past, present and future. *IEEE Spectrum*, 34(6), pp. 52-59.
- [25] Srivardhana, T. & Pawloski, S. D., 2007. ERP systems as an enabler of sustained business process innovation: A knowledge-based view. *The Journal of Strategic Information Systems*, 16(1), pp. 51-69.
- [26] Staehr, L., Shanks, G. & Seddon, P. B., 2012. An Explanatory Framework for Achieving Business Benefits from ERP Systems. *Journal of the Association for Information Systems*, 13(6), pp. 424-465.
- [27] Weill, P. & Vitale, M., 1999. Assessing The Health Of An Information Systems Applications Portfolio: An Example From Process Manufacturing. *MIS Quarterly*, 23(4), pp. 601-624.
- [28] Yoo, Y., Boland, R. J., Lyytinen, K. & Majchrzak, A., 2012. Organizing for innovation in the digitized world. *Organization Science*, 23(5), pp. 1398-1408.
- [29] <https://books.google.co.in/books?id=AuieBQAAQBAJ&pg=PA6&lpg=PA6&dq=digital+media+easing+out+consumer+processes&source>
- [30] https://www.cohnreznick.com/sites/default/files/pdfs/Digital_Changes_Everything_WhitePaper.pdf
- [31] <http://techtrends.accenture.com/us-en/business-technology-trends-report.html>
- [32] http://www.mckinsey.com/insights/strategy/strategic_principles_for_competing_in_the_digital_age
- [33] https://www.capgemini.com/resource-file-access/resource/pdf/Digital_Transformation__A_Road-Map_for_Billion-Dollar_Organizations.pdf