Technology Adoption for NGO Management: A Case Study of ATMA Foundation

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Abstract

Mammoth leaps in technology in recent years have revolutionized industry like never before, leading to what is referred to as the 4th Industrial Revolution, or Industry 4.0. The digital transformation of the world has lent new scope to automation, collaboration and man-machine interfaces. According to Haleem et al. (2023)[1], Management 4.0 increases efficiency and reduces human error in management processes, through the use of technological advancements like Artificial Intelligence, Virtual Reality, Internet of Things, Robotics etc. In this background, it is relevant to study how Non-Governmental Organisations are adapting, and how well they are poised to harness the possibilities of management 4.0. In India, new regulations by the Government have brought the onus on Non-Governmental Organisations to streamline their management especially with regard to financial transactions, compliance, monitoring etc. This increases the relevance of digital transformation for NGOs in India, and a study on its possibilities and challenges will help NGOs prepare a sustainable roadmap.

This paper uses the single case study method to explore how the technological advancements of industry 4.0 are playing out for Non-Governmental Organisations. According to Gilgun, (1994)[2] and Takahashi & Araujo, (2019)[3] when it is required to do an intensive study of a phenomenon with the aim of understanding its various aspects and repercussions, a single case study method is a useful tool. The organisation chosen here as the 'case' is ATMA Foundation, a non-profit voluntary organisation with 17 years' history, working on different verticals, and hence having a wide scope for adopting better management systems.

The methodology used here consists of interviews, observation and review of organisational documents. A checklist of digital tools commonly used by NGOs was prepared, and it was found that ATMA Foundation already uses or is exploring the use of more than 75% of these. The leadership team also expressed their willingness to adopt new technology.

The organisational processes were reviewed and a general framework of management needs was prepared. After consultation with experts in digital technologies, the researcher identified new tools which would greatly enhance the efficiency of the organisation. It was found that the organisation is currently making good use of many tools like MS office, cloud storage, emails, Zoom, Google meet, WhatsApp, Tally Prime, Systools and OneDrive. Some of the new and/or AI powered tools identified as suitable for this organisation include Zoho Creator, Zoho CRM, Zoho Projects, Workday, Big Data, MS Office with copilot, Open AI, Bing and Bard. Challenges identified include initial cost, upskilling of employees, realigning management processes and ethical issues. Solutions to overcome these barriers ranged from

software donations and pro-bono consultations to conducting change management sessions for leaders and employees.

The study concluded that even small NGOs had huge potential to harness technology for Management 4.0, and the challenges involved could be overcome with foresight and planning.

Introduction

Non-governmental organisations play a significant role in civil society. They are the voice of the people, in that they work on the ground and understand the challenges of each community. They liaise with the Government to influence policy and engage with corporates to mobilise resources for implementing effective solutions to these challenges. This role, which is much bigger than a traditional concept of 'social service', warrants a high degree of professionalism and management in NGOs. As drivers of progress at the community level, NGOs have to keep abreast of progress in other aspects as well.

The 4th Industrial Revolution (4th IR) which is commonly termed as Industry 4.0, has revolutionised industry and management like never before. Artificial Intelligence, Internet of Things, Robotics and Cloud technologies have created new ways of thinking and working. Corporates are using disruptive technology not only in production and service delivery, but also in management. This new avatar of Organisational Management using automation and integrated state of the art technology for management, is termed 'Management 4.0'.

It has always been a norm that, whatever new methods the market adopts, NGOs will be organically pressurised to follow them too (Eikenberry & Kluver, 2004)[4]. In the present context, this means the adoption of digital technologies and platforms for restructuring themselves at the local, regional and global levels. According to Williams (2018)[5], this trend has already set in. Different studies have also pointed out how NGOs can leverage the same technologies like commercial organisations to increase capacity, improve stakeholder engagements, cut costs, tap new revenue sources, streamline processes and enhance service quality. (Dufft & Kreutter, 2018[6]; O'Grady & Roberts, 2019[7]; Ehnold et al., 2020[8]; Walker et al., 2020[9])

However, according to Lynn et al (2022)[10], there is also a pressing need to consistently measure and monitor the digital progress of the non-profit sector, to ensure that they are at par with the other parts of society in this regard. A study by Texas-based enSync Corporation[11] details common post-covid digital trends in US-based non profits. These range from increased social media presence and organsiational visibility to the use of integrated software for automation and effectiveness in internal and external collaboration, stakeholder engagement, reporting, fundraising and accounting.

In the Indian scenario, there has been an overall push for digitisation through Government -initiated campaigns like Digital India. The Government of India has also come down heavily on NGOs with regard to compliance, transparency in financial transactions and reporting, especially in the foreign funding sector. In this situation, Indian non-profits can no longer turn away from technology. On the other hand, intelligent and judicious use of the opportunities of Industry 4.0 can steer the Indian NGOs towards sustainable and scalable growth.

According to unofficial data[12], there are over 30 lakh non profit organisations in India. However, there are only 1,71,353 NGOs registered on the NGO Darpan portal[10] of NITI Aayog, out of which 16303 have a current FCRA approval from the Ministry of Home Affairs[13] to receive funds from foreign countries. The

Government has also recently introduced the CSR 1 registration under the Ministry of corporate affairs, which is compulsory for NGOs to receive corporate social responsibility funds from Indian enterprises. The registrations and filings on these portals are fully online. Hence, lack of digital awareness and expertise of grassroot NGOs may prevent them from registering on these portals and fulfilling their compliance needs.

Restructuring of Indian NGOs in the wake of Industry 4.0 opens up a wide scope for study and discussion, especially so because of the wide diversity of the country and its civil society.

The present study, while keeping in mind this vast potential, focusses on an in-depth analysis of a single grass-root level NGO with regard to its digital environment- the current capabilities, future possibilities, approaches, challenges and potential solutions.

Case presentation

The organisation selected for the study is ATMA Foundation. ATMA Foundation is an NGO that works in different verticals like child protection, education & development, empowerment, family & relationship, financial literacy, disaster relief and livelihood. Based at Thrissur, ATMA Foundation has activities in different parts of Kerala. It was interesting to note that ATMA Foundation has, among its 11 projects, one project, ATMA Uyare, is run fully online. ATMA also has a project for Digital & Financial Empowerment. This prompted the researcher to study this organisation in detail with regard to their digital environment.

Based on a review of studies about digitisation of NGOs a checklist was prepared, listing the most widely used digital tools by nonprofits (Checklist 1). This was filled for ATMA Foundation after interviewing employees and volunteers working in different departments.

Checklist 1

Please tick the tools/ portals you are currently using now or actively exploring for future use

☐ Website
☑ Organisational Email
☑ Social media handles
☑ Whatsapp Business
☑ Google Business Profile
☑ Google for Non-Profits
☑ Google ad grants
☑ Cloud storage
☑ Microsoft for Nonprofits
☑ Adobe for Nonprofits
☑ Google Analytics
☑ Online Payment Gateway
☐ CRM
☐ Marketing emails
☑ Newsletters
☐ MIS software
☑ Any digital system for marking attendance of staff

☐Content writing app (ChatGPT, Bing, Bard etc)

☑Online Crowdfunding platforms

☑Accounting software

☑Google meet/ Zoom/ Webex/ Teams

☑MS Office

☑Systool

☐Netsuite ERP

☐Customised app for organisation/ project

☑Google Calender

5 key members of the leadership team of ATMA Foundation were interviewed regarding their approach to technology, and their readiness to upgrade digitally.

A detailed list of the application of digital tools and processes being currently used at ATMA Foundation was prepared. (Table 1)

This list was thoroughly reviewed through a discussion with the leadership team of ATMA Foundation and experts in digital technology. More advanced and easy to use tools which could replace the existing ones were suggested. The suggestions were compiled and submitted to the organisation (Table 2). The discussions also addressed the challenges in upgrading to new technologies, and possible means and resources to overcome the same.

Table 1: Areas Of Current Application of Digital Tools

Area	Tools
Office Administration	MS office, Email, Systools (WCF), Cloud Storage, Cloud Form
Social Media Management	Excel
Finance	Tally Prime, MS Office
Beneficiaries Management	WhatApp, Excel, Google Forms, Cloud Storage
Project Management	Google form, MS Office
Donor Management	Excel
Volunteer Management	Excel
Documents and Reports	MS Office, Cloud Storage
Content Creation	MS Office, Adobe Photoshop, Adobe Premiere Pro, Canva Pro, Windows Movie Maker, Premiere Rush
Collaboration	WhatsApp, Google Meet, Zoom, Email
Employee Management	Google Forms, Excel
Security	Windows Defender
Events and Campaigns	Google Form, Website, Google ads, Certify'em, Zoom, Google Meet, Streamyard, Google Calender
Resource Mobilisation & Donations	Netbanking, UPI, Crowd funding platforms like Give.do, give2asia, Benevity
IT and Facility Management	MS office, OneDrive for backup from office, Windows defender

Findings

On administering Checklist 1, it was found that ATMA Foundation is already using 20 of the 26 tools commonly used by nonprofits.

The leadership team, on being interviewed, expressed their keen interest and readiness to digitally upgrade the organisation. Even though they had some rational apprehensions, they were convinced that Management 4.0 is the way to the future and has to be implemented at the earliest.

The suggestions given to ATMA Foundation regarding more effective digital tools are summarised in Table 2.

Table 2: Suggestions for ATMA Foundation

Area	Suggested Digital Tools
Office Administration	Workday for NGO employee onboarding, leave, appraisal, etc.
Social Media Management	- Big Data for monitoring public sentiments using socialmedia - AI enabled tools for social media interactions. - AI for audience insight, personalized content, sentiments analysis, influencer identification, language translation and localization
Finance	Tally Prime would suffice for now, as there is an issue of integration with Auditors' software also.
Beneficiaries Management	Zoho CRM
Project Management	- Zoho Projects - IOT devices to real time monitoring of different projects in remote places. - AI tools for language translations, Disaster Response and resource allocation
Donor Management	- Zoho Creator - Big data for getting donor preference, behavior, and trends. - AI-powered tools for personalized donor communication - AI for predictive analysis of donor behavior and fundraising success rate
Volunteer Management	- Zoho creator - AI for matching and mapping volunteers to specific projects, volunteer onboarding, personalized volunteer engagement and language translation,
Documents and Reports	MS office with co-pilot, OpenAI, Google forms, Microsoft forms
Content creation	- MS office, Open AI, Bing, Bard, Grammarly - AI tools for image and video creation
Collaboration	MS Teams, Zoom, Google meet, WhatsApp, Slack
Employee Management	Workday for NGO employee onboarding, leave, appraisal, etc
Security	Firewall management, secondary internet connection

Events and Campaigns	● Big data for identifying the campaign. ● Zoho creator ● All socialmedia and tools mentioned above. ● AI for sentiments analysis, chatbots, virtual assistance, content creation, predictive analysis, audience segmentation and targeting
IT and Facility Management	Firewall management, Inventory management, NEXTGen End points protection

The leadership team is concerned about the challenges involved in the adoption of new technology. Some of these are mentioned in Table 3

Table 3: Challenges in Technology Adoption for ATMA Foundation

Challenge	Consequence
Lack of expertise of leaders and managers in technology	Inability to choose which software to use, especially with so many available
Existing employees lack skill and awareness in new technologies	Employees may resist the change, fearing they will lose their jobs
Upskilling employees	Work hours will be lost in training
Investment for new technologies	Budgetary constraints
Difficulty in getting beneficiaries to use technology	Beneficiaries may quit the program
Difficulty in convincing traditional donors about the budget spend for technology	Donors may stop donating
Difficulty in overhauling the existing processes to suit the new technologies	Work disruption and wastage of valuable time
Ethical concerns regarding the use of AI	Stakeholders may not appreciate the use of AI driven technology

The following suggestions were given on ways to overcome these challenges:
● Utilise the services of volunteers from the IT sector. Some corporates, for example, Ernst & Young, Cisco etc. provide pro-bono consultations as part of their employee engagement programme.
● Student volunteers from reputed institutes like IITs and NITs also might be interested in volunteering.
● ATMA Foundation can send volunteer requests to such companies, or solicit volunteers through social media, website, Google ads etc.
● Utilise the Tech4Good platform to assess existing digital competencies. The platform itself gives suggestions and guidance on suitable upgrades.

- Use software donations of IT companies, either through direct registration in their nonprofit programme, or through third party platforms like TechSoup.
- Look for corporate and institutional donors who specifically fund technological upgradation and non-programmatic expenses. (Eg: Impact fund by Twilio.org, ATE Chandra Foundation)
- Conduct awareness programmes for employees on the merits of technology, to get their buy-in. Convince them of the need for upgrading. Give them confidence that these are easy to use, and they can master it easily.
- Involve more volunteers to support employees during the transition period.

Discussion

The study has shed some light on the current digital capabilities of ATMA Foundation. It was noted that ATMA Foundation, though a small NGO, has already started to use technology for its day-to-day operations. They are also aware of the avenues of technological support and have taken baby steps in availing these opportunities. They are registered on the NASSCOM Bigtech platform where nonprofits can get subsidised software products from all reputed companies. They are also availing Google ad grants and have entered into the YouTube partnership programme.

During the covid pandemic, when NGOs had to cut down their field activities drastically, ATMA Foundation found innovative ways to keep up their activity profile. They launched 'Uyare', a project to provide live online learning support to children from Child Care Institutions across Kerala, with classes by expert volunteer teachers from across the globe. They have also utilised platforms like Streamyard to organise webinars on academic and field related topics. These webinars, attended by thousands of students, had expert faculty, like Dr K Radhakrishnan, former ISRO Chairman, Prof V K Malhotra, Member Secretary, Indian Council of Social Science Research, Justice N Nagaresh, Kerala High Court Judge, Dr Muralee Thummarukudi from the UNEP, etc. They also conducted online dance festivals with professional artistes.

Sri C K Suresh, the founder and director of ATMA, is a visionary who relentlessly pursues futuristic goals. It is thanks to his leadership that the key personnel at ATMA Foundation are having a positive approach to technology adoption.

An interesting perspective that came out of the study was regarding the approach of senior citizens to technology. The volunteer team of ATMA Foundation comprises mostly retirees and those above 50 years of age. It was observed that these people are very excited about new technologies, and are taking the time and effort to learn, mastering it within no time. They are also finding that technology enables them to do many things that they otherwise could not do. For example, during covid, when it was considered highly unsafe for senior citizens to venture out, these volunteers could 'work from home' and engage in administrative and even projects-related activities of ATMA Foundation.

This opens up a whole new vista of possibilities in adopting a strength -based approach to senior citizens' wellness. Senior citizens have a wealth of experience and wisdom, and usually a whole lot of time. Instead of confining them to the four walls of their home, they can be encouraged to take up volunteering activities. NGOs can restructure their organisational policies and processes to include senior citizens. They can leverage the possibilities of technology to achieve this inclusion.

Conclusion

Even though the disruptive technologies in the wake of Industry 4.0 seem to be huge and unattainable in

the beginning, NGOs are not far behind in catching up with the changes. In spite of all their limitations, the pure passion that characteristically drives them, is propelling them to adopt and adapt. ATMA Foundation is a good case study of how NGOs are re-structuring and re-inventing themselves in the wake of Industry 4.0. Undoubtedly, Management 4.0 is the new normal and those NGOs who harness its possibilities will definitely reap the benefits of sustainability and scale.

Reference

1. Haleem, A., Javaid, M., Singh, R. P., Suman, R., & Khan, S. (2023). Management 4.0: Concept, applications and advancements. *Sustainable Operations and Computers*, *4*, 10–21. https://doi.org/10.1016/j.susoc.2022.10.002
2. Gilgun, J. F. (1994). A Case for Case Studies in Social Work Research. *Social Work*, *39*(4), 371–380. http://www.jstor.org/stable/23717047
3. Takahashi, A. R. W., & Araujo, L. (2019). Case study research: Opening up research opportunities. *RAUSP Management Journal*, *55*(1), 100–111. https://doi.org/10.1108/RAUSP-05-2019-0109
4. Eikenberry, A. M., & Kluver, J. D. (2004). The Marketization of the Nonprofit Sector: Civil Society at Risk? *Public Administration Review*, *64*(2), 132–140. https://doi.org/10.1111/j.1540-6210.2004.00355.x
5. Williams, Kirsten C. (2018). Intersections of Technology and Civil Society. K4D Helpdesk Report 448. Brighton, UK: Institute of Development Studies
6. Dufft, N., & Kreutter, P. (2018). Digitization in non-proft organizations: Strategy, culture and skills in digital change. In Future-oriented foundation management (pp. 105–115). Springer Gabler.
7. O'grady, J., & Roberts, P. (2019). *The Digital Transformation of Irish Non-Profit Organisations*. https://ceur-ws.org/Vol-2563/aics_36.pdf
8. Ehnold, P., Faß, E., Steinbach, D., & Schlesinger, T. (2020). Digitalization in organized sport – Usage of digital instruments in voluntary sports clubs depending on club's goals and organizational capacity. Sport, Business and Management: An International Journal. https://doi.org/10.1108/SBM-10-2019-0081
9. Walker, T., Esmene, S., Colebrooke, L., Leyshon, C., & Leyshon, M. (2020). *Digital possibilities and social mission in the voluntary sector: The case of a community transport organisation in the UK*. Voluntary Sector Review, 11(1), 59–77. https://doi.org/10.1332/204080520x15787076882640
10. Lynn, T., Rosati, P., Conway, E., Curran, D., Fox, G., & O'Gorman, C. (2022). *Digital Towns: Accelerating and Measuring the Digital Transformation of Rural Societies and Economies*. Springer International Publishing. https://doi.org/10.1007/978-3-030-91247-5
11. Ensync(2022)https://www.ensync-corp.com/blog/2022-technology-trend-report-for-nonprofits-and-associations
12. NGO Darpan (2023) retrieved from https://ngodarpan.gov.in/index.php/search/
13. Ministry of Home Affairs Government of India retrieved from https://fcraonline.nic.in/fc_dashboard.aspx.