Preface by the Author

Why I Wrote this book on Gram Panchayats?

Reflecting on the origins of this book, I am reminded of a famous line by former American President John F. Kennedy: "Ask not what the country can do for you, ask yourself what you can do for your country."

After completing my studies at IIT Kanpur, I pursued a Ph.D. in America and subsequently worked for several semiconductor technology companies, including Intel in the Silicon Valley and Robert Bosch in Europe. During my time in the tech industry, I had the opportunity to travel and work in over 17 countries, such as Brazil, Switzerland, Malaysia, the Philippines, and Singapore. These countries had significantly advanced manufacturing companies, and it became my dream to return to India and establish a semiconductor technology company.

It was the year 1993, and India had just entered the free market economy. However, neither the government nor the major industrialists were prepared to venture into the globally competitive semiconductor industry. My efforts to convince India to set up semiconductor manufacturing, spanning six years from 1994 to 2000, proved to be in vain.

The experience of dealing with the government and the inefficiency I encountered when interacting and transacting with government entities motivated me to start a software company called "Inkroma E-Governance." The acronym INKROMA was derived from "Integrated Enterprise Knowledge & Process Management." I leave it to the reader's imagination to figure out how we arrived at INKROMA!

My mentor was Michael Hammer, the inventor of the concept of Business Process Re-Engineering (BPR). Finally, in 2001, he acknowledged his "inadvertent sin" and realized, as outlined in his book "Agenda," that BPR was not a panacea. He explained how breaking down the walls between various departments within an enterprise and extending private processes to collaborate virtually with vendors, customers, and all stakeholders in the supply chain was crucial for the survival of a business enterprise.

In a democracy, where the government is led by elected representatives and bureaucrats, their primary responsibility is to serve the citizens. "Jana Seve Janardana Seve" should be their motto. Conversely, citizens, whose taxes fund government services, must have visibility into how their money is spent by different government departments. The government enterprise comprises numerous internal processes and an equal number of processes that connect with the outside world. Recognizing the government as an "enterprise" and citizens as customers, in 2002, I made the decision to develop a comprehensive Government Enterprise Management system. This system would break down barriers within government enterprises and facilitate interaction with the outside world, thereby enhancing efficiency, transparency, and accountability.

“What Will Be," a book by Prof. Dertouzos of MIT in 2001, written at the peak of the Dot-Com revolution, was another motivating factor in bringing technology to the government. In his book, Prof. Dertouzos elaborated on how technology would transform processes in businesses and governments in the 21st century.

Swamy's book is like the Bible found in every government enterprise across India. It includes all government processes and corresponding rules, as outlined in FR & SR and GFR & GAR, and is clearly explained in Swamy's book. Using this as a template and leveraging available

web technologies from IBM and Oracle, I developed a comprehensive Workflow Automation solution for Indian government organizations.

Our company, INKROMA, studied all the processes of a government organization, including administration, HR, finance, accounts, procurement, project management, and more than 140 other processes. For the first time in India, we developed an integrated ERP solution for the government and implemented automation of government processes in a few CSIR & DST organizations. Our first opportunity to develop and implement a Workflow Automation system was pioneered by CFTRI, a CSIR Laboratory in Mysore. Later, it was implemented in major DST & CSIR laboratories such as NAL in Bangalore, ARI in Pune, and a few other institutions.

However, the implementation of INKROMA Workflow Automation technologies in GoI Enterprises faced obstacles due to the difficulties of securing large-scale funding in government establishments and the lack of computers and high-speed internet connections for every government employee.

Gram Panchayat Experiment:

During one of my visits to Kuvempu University, I discovered that Prof. Sadanand and his team from the Political Science department were involved in training elected representatives and bureaucrats of Gram Panchayats. This gave us an opportunity to understand the processes of a Gram Panchayat enterprise and how village citizens interacted and transacted with the Gram Panchayats for all their local government services. Prof. Sadanand's team at Kuvempu University were enthusiastic about working with us, and for over a year, they helped us modify the INKROMA workflow technology to suit the requirements of a Gram Panchayat.

Given that there are 240,000 Gram Panchayats across India, our vision was to bring efficiency, accountability, and transparency to Gram Panchayat enterprises using 21st-century technologies, particularly the Internet. I believed that if we strengthen the governments at the bottom of the pyramid, it would be possible to build stronger governments at the Taluk and Zilla Panchayat levels, scaling up vertically to the state and central levels. Moreover, I aimed to bridge the urban-rural digital gap and empower rural India through digital transformation.

Our Gram Panchayat experiment received support from the SIRD and RDPR departments of Karnataka, and we were able to implement the Sampoorna Panchayat technology in more than 30 Gram Panchayats. This pilot project was recognized through innovation awards by the Bihar Government, nominations for the National E-Governance Award, and inclusion in the Bank of Ideas by the then RDPR Minister, Nitin Gadkari. We even received an invitation from the Afghanistan Government for technology transfer. These accomplishments provided us with encouragement and motivation to continue.

More than 20 years of experience in the field, coupled with observations of the lack of training, non-usage of computers by elected members of Gram Panchayats, and the unavailability of the internet, have not diminished my enthusiasm to bring frontier technologies to rural India. I am confident that the future of governance at the Gram Panchayat level and in other rural institutions will embrace information and communication technologies as the key to achieving inclusive growth in India. With this confidence, we have developed numerous technologies for digitizing rural institutions, including Primary Health Care centers, the Public Distribution System, capacity building of Gram Panchayats, and even Natural Language Processing for tribals.

The story of this book narrates the different technologies we have developed and implemented, and continue to work on, in order to digitally transform rural India. Moreover, it explores how these technologies will accelerate the achievement of the United Nations Sustainable Development Goals (UNSDGs) by 2030.

The structure of the book is as follows:

- Chapters 1 and 2: I describe why this book is written for the elected representatives of a Gram Panchayat and share the insights gained from interactions with various public and private institutions invested in rural development.
- Chapters 3 and 4: I discuss the evolution and growth of Panchayat Raj from the Vedic period to the 21st century, including Mahatma Gandhi's vision of sovereign village republics.
- Chapter 5: I emphasize the importance of digital technologies.
- Chapter 6: I introduce the concept of the "Theory of Change" and explain its application for the transformation of Gram Panchayats.
- Chapters 7 to 15: I describe various technologies such as NLT, NLP, WFA, IoT, AI-ML, Blockchain, Last Mile Internet Technologies, and the concept of Six-Sigma Gram Panchayat. Each technology is accompanied by actual case studies showcasing their implementation in a Gram Panchayat context. It is my hope that these examples will motivate Gram Panchayat readers to take the initiative to adopt these technologies in their own Gram Panchayats.
- Achieving the 17 UNSDG goals by 2030 is an imperative set forth by the Government of India. However, many Gram Panchayat elected members find it challenging. In Chapters 16 to 33, I explain each of the 17 UNSDGs through case studies. I also highlight the importance of taking on this challenge and

discuss potential sources of assistance available through various schemes to achieve these goals.

- In order to achieve the UNSDG goals by 2030, a paradigm shift in thinking and operationalizing the management of Gram Panchayats is crucial for the elected representatives. This is explained in Chapter 34-35. Additionally, in Chapter 36, I discuss how GPERs can leverage expertise from NGOs, public, and private enterprises outside the Gram Panchayat. The concept of global interaction for GPERs using the technologies discussed in earlier chapters is extended in Chapter 37.
- In the private sector, enterprises are often categorized using an Enterprise Maturity Model, known as the Capability Maturity Model. In Chapter 38, I introduce a Capability Maturity Model designed specifically for Gram Panchayats. It is my hope and dream that every Gram Panchayat in India reaches Maturity Level 5.
- Lastly, in Chapter 39, I touch upon how the 169 targets of the UNSDG can be incorporated into the Gram Panchayat Development Plan (GPDP) system established by the RDPR Ministry of the Government of India.

- **Contents of the Book:**

- Many books in this domain, focusing on Gram Panchayats and technology roadmap, are typically written in English and are understandable by educated officers in RDPR departments who make decisions from the top-down. I have intentionally written this book with an elected representative in mind. Only when the elected representative understands the importance of a "Self-Reliant Gram Panchayat" will they break free from relying solely on directives from higher-level officers at the central, state, and district levels.

- My objective is to break the chain of top-down decision-making and empower Gram Panchayat elected representatives to make decisions for their own Gram Panchayats. The book is intentionally written in a conversational style so that even an uneducated GPER can comfortably understand the questions, technologies, apps, and ideas discussed.

- Organizational development of an institution like a Gram Panchayat is not a one-time process. For continuous improvement, future generations need to understand management theories such as the Theory of Change, Six Sigma, and potentially Agile methodologies. With this in mind, I have explored some of these ideas in the book.

- There is a saying: "Jnanam Uttamam – Anubhavam Paramottamam" (Knowledge is good, but experience is superior). Therefore, the technologies and ideas elaborated in this book are based on my experience in developing and implementing them in the Gram Panchayat environment. I have included case studies to demonstrate the necessity and usefulness of these technologies.

- Once we bring digital transformation to Gram Panchayats using these technologies, we will be able to collect real evidence-based data. Modern Data Science allows us to gather data from multiple sources and create a Data Lake, which in turn provides a Decision Support system. Additionally, by utilizing Artificial Intelligence and Machine Learning technologies, we can perform predictive analysis at the village, community, and Gram Panchayat levels in areas such as health, education, nutrition, security, and more.

About the title: "Rebooting Democracy in Gram Panchayats"

The Gram Panchayat is the lowest tier of government in India, and it is responsible for local governance in villages. The 73rd Amendment to the Constitution of India, which was passed in 1992, gave Gram Panchayats greater powers and responsibilities. However, in recent years, there has been a decline in the effectiveness of Gram Panchayats, and there is a need to reboot democracy in these institutions.

There are a number of factors that have contributed to the decline of Gram Panchayats. These include:

- Lack of political will: There is often a lack of political will to support Gram Panchayats. This is because the central and state governments often see them as being less important than other levels of government.
- Lack of participation: Citizens and elected representatives of Gram Panchayats are often not aware of the powers and responsibilities of Gram Panchayats, and they do not participate in their activities. This is due to a number of factors, including illiteracy, poverty, and social exclusion.

There are a number of things that can be done to reboot democracy in Gram Panchayats. These include:

- Strengthening political will: There needs to be a stronger political will to support Gram Panchayats. This will require the central and state governments to give them more powers and responsibilities and for Gram Panchayat members to become aware of their rights and making them aware that they are the architects of their own destiny.

- Increasing participation: Citizens and Elected representatives need to be made aware of the powers and responsibilities of Gram Panchayats, and they need to be encouraged to participate in their activities. This can be done through digital empowerment of rural citizens, through awareness campaigns, training programs, and other technological initiatives.

Rebooting democracy in Gram Panchayats is essential for strengthening democracy in India.

About the Subtitle: Applying Frontier Technologies for Capacity Building and achieving Gram Swaraj

- Technology can be used to improve governance in Gram Panchayats in a number of ways. For example, technology can be used to make information more accessible to villagers, to facilitate communication between villagers and their representatives, and to improve the efficiency of service delivery.
- The sub-title guides the reader on developing a roadmap to achieve the UNSDG targets using the technologies described in the book. It aims to build the capacity of individuals in Gram Panchayats and the institutional capacity as a whole.

- **Who is this book for?**

- According to the 73rd amendment, the elected representatives from different wards of a Gram Panchayat elect the Adhyaksha (Sarpanch) and the Upadhyaksha (Deputy Sarpanch). The primary audience for this book is the Adhyaksha and the Upadhyaksha of Gram Panchayats, as they

have the responsibility to lead the Gram Panchayat to greater heights.

- Additionally, elected representatives have made promises to their constituents, and thus have an obligation to deliver. Therefore, the second target audience is the GPERs, particularly those who genuinely want to make a difference.

- Thirdly, the book is relevant to bureaucrats, such as PDOs and Secretaries of Gram Panchayats. They should be motivated to partner with the Adhyaksha and the GPERs, not considering their roles as merely "government jobs." They should guide the GPERs in understanding the technologies and help them achieve the UNSDG targets.

- Lastly, this book is for every citizen in a village. When citizens demand change, local governments will strive to provide it. An educated villager adds tremendous value to participatory democracy.

My Dream:

India has provided me with education at premier institutions and the opportunity to learn technologies, develop solutions, and experiment with them in various institutions. This book represents my small contribution to my country as it strives to become a "Thought Leader for the World."

My greatest aspiration is for Gram Panchayats to enhance their capacity and become self-reliant by achieving the United Nations Sustainable Development Goals through the utilization of frontier technologies.

My personal journey towards writing this book has been a long one, filled with moments of both agony and ecstasy. The fruition of my efforts will come when the book is read by Gram Panchayat members and the knowledge contained within is implemented across the 240,000 Gram Panchayats in India.

- **Dr. Shankara K. Prasad**

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