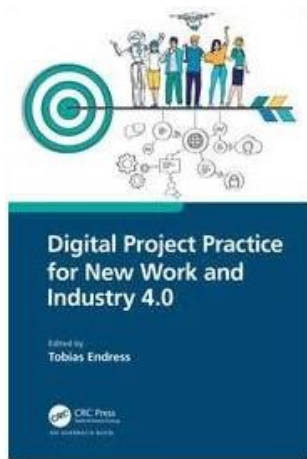


PM WORLD BOOK REVIEW



Book Title: ***Digital Project Practice for New Work and Industry 4.0***¹

Author: **Tobias Endress, Editor**

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Introduction

Industrial revolution, which started with steam & mechanization, electrical power & mass production, to automation & IT systems, has been continuously improving and evolving. This book talks about the 4th Industrial revolution (IR4), which is about automation, Smart systems and cyber-physical production systems and new ways of working. New Work and Industrial Revolution 4 is about massive utilization of technology such as AI, Big Data, AR/VR (Augmented and Virtual Reality), Cloud computing. It is also about modifications in society and organizations.

While riding on the wave of 4th IR and New Work (NW), if you are looking for new practices to be followed, how to overcome nuances with existing practices, this is the book to pick.

The book starts with basic concepts of IR4, their influence on organization communication, impact on work environment. It touches upon various topics such as remote working, digital unions, lean production impact on industry practices, concept of open bank, digital stress. There is an interesting detailing on some of the scandals in automobile industry and how to improve corporate culture.

Overview of Book's Structure

The book is divided into 13 chapters. Starts with the discussion on IR4 and impact on communication and work environment, strategies related to integration of IT, ICT, (Information Communication Technology) in production processes. Highlights the fact

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that IR4 is not just about implementing new technology. It is about a cultural philosophy, how to increase visibility, flexibility and become/stay more competitive.

Reader is left to ponder on how production automation is moving towards increased individualized products, and not just speed and quality. Author goes on to talk about hybridization of Cyber-Physical worlds – remotely monitor patients health in real-time, digitally manage workflows at production plants, optimizing dock loading with communication between cranes, AGVs (Automated Guided Vehicles). Digital competence is not just for IT, but for project managers also, to manage these “Smart” industries. Author touches upon various aspects such as cloud computing, data privacy & safety, collaborative services with a need for speed, decision making based on digital framework, AR/VR. Leads to further reading on business processes restructuring due to digital components, machine to human communication challenges, consequences of “SMART WORLD” on people, jobs, life-style changes.

The author moves on to talk about the changed trend, that traditional office is dead. The book provides a fine balance on issues/limitations and benefits/best practices of remote work. Various topics are touched upon like Geo arbitrage, inclusivity of remote workers so they don’t feel isolated, creating a culture of accountability, preventing digital burnout. The book talks about 10-12 tips on how to make remote work more efficient. Newer tools for managing communication and collaboration, how productivity moves to the cloud, are discussed.

The next chapter ties remote work with value of informal networks. Book references Bergmann, a charismatic professor of philosophy at University of Michigan. He claimed that New Work is a movement to shift humans from, de-spiriting mundane tasks, to passionate, creative work. Not living to work, but to find “job-free time” to pursue personal callings.

For a manager or head of the organization, this chapter throws light on how to achieve virtual teamwork, fostering strong and weak ties to create a strong network of relational support, positive effects, and downsides (like “Hey Joe Principle”) of informal professional networks within the organization, work from anywhere and lack of integration with the team/organization. The book refers to Satya Nadella’s “Hybrid Paradox” – where employees want WFA (Work from anywhere) and wish for in-person connections.

Sailing business consultant, using AI and automation for new hire onboarding, new job roles to “manage” virtual collaboration, re-building social capital are interesting reads.

The book moves on to link New Work and fundamental changes in a company. Author expounds about how New Work doesn’t automatically lead to higher performance, and how raising generation of young employees want to see purpose and value in what they are working on. Companies must be more agile and customer centric. Leading to having multiple teams, driven by OKR (Objectives Key Results) and coordinated across the board. That way individual departments, projects are not running in silos,

organizations will have pure cross-functional agile team structure. Also, to note is a shift from pyramidal middle management to role specific management.

A whole chapter is dedicated to business ethics, NW and how to watch out on ethical blindness, collaborative cheating. In the drastic move to digitize, adopt to new technologies such as AI, systems get complicated, it gets difficult to see how new technology benefits key stakeholders. Out of many such instances in automotive industry, VW Emissions Scandal is used to delve into a decade long collaboration between managers and software engineers across companies, resulting in the creation of a “defeat devise”, to operate profitably. Author emphasizes the need for managers of digital projects to adopt value-based perspective to business decisions.

“How 4th IR Influences Our Work Environment” chapter talks about how innovation will rely on collaboration platforms that service individual enterprises, start-ups, SMEs (Small & Mid-sized Enterprises) due to their agility and entrepreneurial flexibility. A detailed case study on Singapore Smart Industry Readiness Index is presented, which is a framework to help manufacturers start, scale, and sustain their digital transformation journeys. However, it is important to note that human capital is not decreasing with IR4. With many of the current jobs getting automated, the author throws light on the need for Skill 4.0 or a broader Education 4.0. There is also a detail provided on Society 5.0 - introduced by Japan’s Council for Science Technology and Innovation – which uses digital transformation for economic growth and solutions to social problems, also balancing between cyberspace and physical space to support all citizens.

In my view, next 2 chapters touch upon topics which are not only important for today’s employees but also to the students and society at large. The topics are: Digital Stress and Coping with it; Economics of Mind, Body, and Spirit. Stress caused due to constant need to upgrade to new competencies, work densification due to information overload, fear due to cybersecurity threats, fear of not being able to lose connection with the online world, are discussed.

It is very informative to understand Richard H. Thaler’s Behavioral economics. Author elaborates on two major assumptions of the rational choice theory – role of information and role of money. Aspects such as communication fatigue, unverifiable/unreliable information, money can be a disincentive, meditation to declutter the mind, benefits of yoga, are discussed here.

The book would have become incomplete if legal aspects arising out of New Work and Hybrid forms of collaboration were not covered. Chapters 9 and 10 are very key to understanding this aspect. These chapters talk about legal issues which arise due to cross-border collaboration in an international context, data protection legal challenges, Copyright legalities when co-creators fall under different jurisdictions etc., Also there are references to Katsabian studies and other, which talk about regulations under labor law, given the digital reality which allows work where you like, when you like and non-traditional work hours.

Legal forms of cooperation, distribution of profits, rights to IP (intellectual property), legal brackets provided by corporations and innovative corporate forms are detailed. It only leaves the reader awestruck that there is so much more to understand in these areas. Would like to give a special mention to Decentralized Autonomous Organizations forms “DAO”s/smart contracts which are self-executing - without a CEO/board – but with computer programs to map and verify contracts, stored in blockchain.

It doesn't stop here. The next question arises. When AI makes machines act and learn with human-like intelligence, decision making gets shifted to machines or algorithms - from a legal perspective - who is liable for AI? It is very thought provoking to read about the 3 protagonists: the AI, programmer/manufacturer, and the user. And author presents a very revolutionary proposal of an electronic person!

A full chapter is dedicated to application of AI tools in industrial Lean Production. This is to address the complexity of global challenge, rapid delivery, heavy customization, and agility. Autonomous robots, Internet of Things, Additive manufacturing, Augmented Reality are few amongst the 10 elements that are mentioned.

Next chapter elaborates the subject of open banking and digital ecosystems. Connected systems with multiple banks, FinTechs, 3rd party applications accessing financial data to provide customers with better payment experience and extended services, are presented.

Book concludes with the discussion on New Self-managing work systems. Not just remote working, but also AI enabled solutions such as tele-health, tele-trainers, computer mediated communications, Hybrid-Flexible learning, are mentioned. New Work systems, which are enabled by advanced technologies – will be data driven and self-managing.

Highlights

Few highlights from the book are presented below, and these, by no means are exhaustive.

- The shift from platform-centric to human-centric approach, to Internet data and knowledge management - Internet of People (IoP) as it is called. Andrea Lipton's 5 key elements to capitalize on IoP.
- The future of leadership has a new label “Leading from Home”.
- Remember to involve remote workers while brainstorming, discussing solutions to problems. Give your employees more responsibility, not just more tasks to do. Nurture the “entrepreneurial thinking in the employee”.
- Protecting employees from digital burnout. Daimler deletes correspondence that arrives during vacation (Kaufmann, 2014).

- More than ever, managers should focus on having regular one-to-one meetings with employees, look at innovative means of building social capital. Reference of Onboarding buddy.
- The Smart Industry Readiness Index (SIRI) - a suite of frameworks and tools to help manufacturers start, scale and sustain their manufacturing transformation journeys, set benchmark against their peers, and track their progress on their digital transformation journeys.
- Shifting from Smart “things” to Intelligent “systems” – transitioning from information society to knowledge society.
- Transparent or opaque – dilemma? An opaque system, along with pressures to perform may collaboratively cheat. Increasing transparency will be a drastic shift from traditional corporate strategy, which often prioritizes secrecy to cultivate competitive advantages. Solution is a need for a values-based approach to implementing NW philosophy.
- Bhastrika Pranayama or Bellows Breath is a simple guided breathing technique that helps draw prana (life force) into body and mind, clearing out mental, emotional, and physical blocks – reference Himalayan Yoga Institute
- Wyoming, the first state to explicitly codify rules around DAOs wishing to become domiciled in that jurisdiction.

Highlights: What I liked!

The book has illustrated the topic with a good flow – reader will not realize when the subject is being introduced and when it is taken to the depth. Every chapter ends by providing many references, opening doors for extended knowledge on the subject.

Author presents not just the happy path reading, but also paradoxes, making the reader contemplate. Discussions on business practices, legal aspects, mindfulness training, pros-cons of remote working, Digital Unions, work structures are few of the highlights from the book. Human elements are a running theme in the book. Very comprehensive.

Who might benefit from the Book?

According to the 2023 PMI Annual Global Survey on Project Management, two-thirds of companies are engaged in digital transformation efforts. Companies need future-focused project teams to drive these changes. More and more we see project teams becoming global, diverse, cross functional and many times temporary. In my view, this book is required for entrepreneurs, practitioners, academicians, head of divisions, project managers.

With digital transformations as the mantra for success, I have always wondered what is in it for a PM. Modern project management has its roots in Industrial revolution. Gantt charts were first introduced in early 20th century, which revolutionized how projects were managed. Today we are talking about AI Scrum masters. The advent of IR4 sees greater need for high performing teams, which drives innovative means of managing and measuring. Hence calls for this new learning.

Academicians and practitioners can use this as a podium for simulating dialogue in professional communities. As today's leaders step into tomorrow, it is important to embrace the change and adapt to the new paradigm.

Conclusion

Industry 4.0 is driven by a massive utilization of new technologies replacing humans by machines in few areas and focusing on customer centricity. AI/ML, Big Data, additive manufacturing, nanotechnologies, mean redefinition of businesses as well as societies. As leaders, managers, working in the new world of humans and smart machines, it is important to understand the nuances, have a strong moral compass, abide to legal boundaries, and create a better world for tomorrow.

For more about this book, go to:

<https://www.taylorfrancis.com/books/edit/10.1201/9781003371397/digital-project-practice-new-work-industry-4-0-tobias-endress>

About the Reviewer



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Ramadevi Lanka – PMP, CSM, AWS CCP, is a Program/Project/Quality Management professional with 25+ years of enriching work experience in Information Technology industry. She has managed programs related to InsurTech, FinTech, Banking and Finance, Insurance, FMCG and Corp-IT. She has managed programs/projects at large-scale, mid-tier and startup companies, which are IT services provider and product companies. She has executed Waterfall, Agile Scrum, and hybrid projects for 15+ years - applying PMI and ITIL standards. Adept at delivery excellence, building high performing, diverse, geographically distributed teams.

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