INSTALLING A CULTURE OF INNOVATION THROUGH ORCHESTRATED COMMUNICATIONS AND COGNITIVE TALENT OPERATIONS (NTT COMMUNICATIONS CASE STUDY)

Cristian VLAD*
Fumiaki TAJIRI**
Ana DAMASCHIN***
Hiroaki KANEKO****

Abstract. *Starting with Artificial Intelligence (AI) and continuing with Machine Learning, Blockchain, IoT, Intelligent Learning Platforms, Quantum Computing, Deep Learning, Cognitive Solutions, Learning Management Systems (LMS), Intelligent Global Talent Databases, Prediction Machines and Robotic Process Automation (RPA), talent operators in the whole world are in search of implementing modern technology solutions for enhancing operational efficiency and for developing more engaged, collaborative and better connected organizations.*

Corporate Japan has seen an unprecedented need for revamping talent operations and organizational structures in order to incorporate modern technology and to enhance global competitiveness. Along with modern technology comes modern talent – a rapidly emerging generation of digitally native business practitioners who redefine the business landscape with their new skills, vision for the future of doing business, desires to connect and aspirations for growth.

In an effort to determine how modern technological solutions have changed the dynamics of traditional Japanese organizations and reshaped the architecture of their business, this paper reveals some of the most popular technologies and talent operation practices embraced by Japanese organizations ready to compete on the global market, as illustrated in the case of NTT Communications.

Keywords: *Talent, Communications, International, Business, Innovation, Culture, HR, Technology, Cognitive, Organization, Japan*

I. Introduction

The coalition between HR management and modern technology never mattered to businesses more than it does today; making it impossible to imagine one without the other. HR and HCM systems of today have a technical role at all stages of the hire-to-retire process, and enable managers to truly recover what they have invested in with smart talent technology. Corporate Japan has been going through continuous efforts to embrace emerging technology and to provide their employees with a modern, inclusive and agile

* Ph.D. Candidate, Babes-Bolyai University, Associate Partner, Talent & Transformation Global Business Services, IBM Japan, Partner Faculty, Globis University
** PhD Candidate, LIKEART Resoursces inc CEO, Globis University Lecturer, Babes-Bolyai University
*** Ph.D. Candidate, Babes-Bolyai University, Nagaoka University of Technology, Lecturer
**** Ph.D. Candidate, The Bucharest University of Economic Studies, Globis University, Senior Director

working environment. Along with the implementation of modern technology, there has been an emerging need to reconsider, revisit and update existing regulations and business ethics across industries. Numerous Japanese organizations have embarked on the journey of re-defining their *raison d'etre* and develop modern and relevant Customer Value Propositions (CVP) and Employee Value Propositions (EVP), with special focus on embracing modern technology and social innovation.

The use of modern technology for this purpose is nothing new. So is the way technology itself has evolved. As Sean Gerrish mentioned in his book "How Smart Machines Think", interest and commitment to developing intelligent machines goes back to the late 1960s. "Back then, the field of AI felt like it was roaring ahead, with improvements in neural networks, development of algorithms to play games like chess and Go, excitement at conferences (where AI felt like it was bursting at the seams) and hardware that was growing exponentially with the advent of microprocessors – all just before the field of AI went into a dark period known as the AI Winter"[1]. The AI Winder lasted until around the year 2000, when a cluster of US based technology companies announced their commitment to shift from hardware and software to the development and commercialization on smart machines. The main reason for this shift in strategy was the fact that traditional electronics were rapidly entering a fierce price competition, as both hardware and software were rapidly becoming commodities and manufacturing was taking place all over the world, with a group of Asian manufactures leading the manufacturing game.

International Business Machines (IBM) is one of the early initiators of this shift in technology focus. In 2005, the company sold its personal computer business to Chinese technology company Lenovo and, in 2009[2], it acquired software company SPSS Inc. Later in 2009, IBM's Blue Gene supercomputing program was awarded the National Medal of Technology and Innovation by U.S. President Barack Obama. In 2011, IBM gained worldwide attention for its artificial intelligence program Watson, which was exhibited on the US TV show *Jeopardy!*, where it won against game-show champions Ken Jennings and Brad Rutter. The company also celebrated its 100th anniversary in the same year on June 16. In 2012, IBM announced it has agreed to buy the employee engagement program *Kenexa* and a year later it also acquired SoftLayer Technologies, a web hosting service, in a deal worth around $2 billion.

By 2016, IBM had reported earnings of $21.8bn for the fourth quarter of 2016, as the company shifts from its traditional business to cloud and artificial intelligence (AI)-based products and services.

The company announced that its cloud revenue for the full year was $13.7bn, up 35%, while revenue in its cognitive solutions business, which includes software and transaction processing software revenues, grew by 1.4% to $5.3bn. Sales in this business were driven by demand in cloud, analytics and security, the Internet of Things (IoT), Blockchain, Robotic Process Operations (RPA), cognitive solutions and artificial intelligence (AI). By the end of 2016, IBM Watson – IBM's technology platform that uses natural language processing and machine learning to reveal insights from large amounts of unstructured data – was becoming one of the leading AI products in the industry.

[1] Gerrish, Sean (2018), "How smart machines think", The MIT Press, Massachusetts, page 261, paragraph 2.
[2] IBM website, *"Lenovo Completes Acquisition Of IBM's Personal Computing Division*"

In a transcript of the 2016 earnings call posted on the *Seeking Alpha financial blogging site*[3], senior vice-president and CFO Martin Schroeter, said: "For systems, our revenue and gross profit performance were driven by growth in z Systems, offset by power and storage declines. These results reflect the reinvention of our core systems for work in a new era of computing.

"We have optimised our systems to drive new types of workload, like Blockchain and instant payments. We are expanding our footprint, building new capabilities and solving new types of problems for our clients. And though we are facing some shifting market dynamics and product transitions in both power and storage, our portfolio overall remains optimised to address the demands of an era of cognitive and cloud computing."

Schroeter further mentioned that the company was positioning itself to solve real world business problems by using advanced AI and its own cognititve solutions system. "The debate about whether artificial intelligence is real is over, and we're getting to work to solve real business problems," he said.

"As we move into this new era, it is important to understand what enterprise clients are looking for. They need a cognitive platform that turns vast amounts of data into insights, and allows them to use it for competitive advantage. They need access to a cloud platform not only for the capability, but for speed and agility. And they need a partner they trust, and who understands their industry work and process flows."

Ginni Rometty, IBM chairman, president and chief executive officer, said that the company's shift from its core business to so-called "strategic imperatives" accounted for 40% of the company's earnings. Rometty said: "IBM Watson is the world's leading AI platform for business, and emerging solutions such as IBM Blockchain are enabling new levels of trust in transactions of every kind. More and more clients are choosing the IBM Cloud because of its differentiated capabilities, which are helping to transform industries, such as financial services, airlines and retail." [4]

In Japan, IBM is considered to be one of the most prestigious providers of modern technology and NTT Communications, along with many other telecommunications service providers, decided in early 2017 to partner with IBM to revamp talent operations and organizational architecture.

II Research Objective, Method and Objects

Objective

The main objective of this research is to illustrate the benefits for businesses to explore early, prototype and adopt modern technology in talent practices and organizational architecture development for NTT Communications in partnership with IBM (10/2017 – 12/2018).

Research Objects

NTT Communications and its major subsidiary companies

Research Methodology

We conducted research based on an actual business case study. Additionally, the authors of this research engaged in first-hand participant observation[5] of this change management process. Therefore, we could observe the stages of corporate confusion, the

[3] https://seekingalpha.com/article/4038119-international-business-machines-ibm-management-q4-2016-results-earnings-call-transcript

[4] https://www.computerweekly.com/news/450410768/World-Economic-Forum-warns-of-AI-business-risk

[5] Yin, Robert(2003), *Case Study Research: Design and Methods*, SAGE Publications, Inc; Third ed

various stages of decision making and the whole procedures of organizational and cultural integration, with the eyes of in-house full-time team members, from the start of the project until the end.

III NTT Communications – From "HR as usual" to "Modern Technology Integrator".

Ever since its inception in 1999 as a subsidiary of Nippon Telegraph and Telephone (NTT) Corporation (the largest telecommunications company in Japan and one of the largest in the world), NTT Communications has been providing network management, security and solutions services to consumers, corporations and governments. Upon her appointment as Senior Director of Human Resources and Global Head of Talent in 2015, Kyoko Yamamoto took it upon herself to promote Diversity and Inclusion and to help the organization embrace a wide range of modern technology. Yamamoto worked with her team of 68 talent operators and organizational architects to review existing HR technology and to determine opportunities for revamping people operations by onboarding modern technological practices.

Although NTT Communications is a relatively "young" organizations, most of its executives and core talent transferred from its parent company, NTT Corporation, an organization founded in 1952 as a state-owned enterprise. In 1985, NTT Corporation became a public shared-stock KK (*kabushiki-kaisha*) under the Companies Act of Japan, but the culture of the organization remained predominantly hierarchical, with frequent "job orders" (辞令*irei*) and top-down communications. Ranked 55th in Fortune Global 500[6], NTT is the fourth largest telecommunications company in the world in terms of revenue, as well as the third largest publicly traded company in Japan after Toyota and MUFG, as of September 2018. While NTT is listed on Tokyo, Osaka, New York, and London stock exchanges, the Japanese government still owns roughly one-third of NTT's shares, regulated by the NTT Law.

Confronted with a "business as usual" culture and "things will never change" employee mindset, Yamamoto decided in 2016 to change culture, mindsets and the way business was generally conducted by a combination of efforts: exploring modern technology and developing a work space environment based entirely on ontological design practices, convinced that modern experiences would impact, influence and change the way NTT Communications people thought and behaved.

IV. Discussions and Actions

In order to be able to remodel the organization and to create new systems, processes and tools that people would enjoy utilizing, Yamamoto decided to invite her team of talent operators and organizational architects into an IBM facilitated design thinking exercise. The team started with a general observation process, looking closely around to observe how employees utilize existing technology and to plot out where major pain points could be found.

Yamamoto considered that a proper observation of existing situations, the work environment and daily engagements would not only provide hints for improved synergies, enhanced efficiencies and operational improvements (改善 *kaizen*), but also give way to organizational innovation as well.

[6] Forbes (2018-09-26), "The World's Largest Companies", Jersey City.

Social engineer, lawyer and art historian Amy E. Herman states in her book "Visual Intelligence" that "This is the true lesson of seeing what matters – that noticing the overlooked, the ordinary, or the seemingly unimportant can not only help solve our initial problem or cement our success, it can also produce unexpected, paradigm-shifting, and beautiful by-products. Side effects that impact us and the world around us more than we ever thought possible."[7]

Throughout the IBM Design Thinking exercise, the NTT Communications team of talent operations recognized the need to revamping practices from the very beginning, in order to achieve ultimate efficiencies across the structure. First of all, the talent recruiting team recognized their limitation by working exclusively with pre-determined and pre-contracted talent search agencies, which were primarily scouting potential candidates within the local Japanese market and, sometimes, Japanese candidates working with other Japanese companies within the Asia Pacific region. After exploring various technological collaboration opportunities, NTT Communications talent acquisition officers showed high interest in having access to talent pools globally, without restrictions in terms of pre-determined talent acquisition pools and agreements with pre-contracted recruiting operators. Furthermore, access to and utilization of intelligent search engines would also contribute to increasing the speed and breadth of the talent search process itself. As a result, the team agreed to test *Watson Talent*, a cognitive talent search platform which enabled the Talent Acquisition team access talent beyond conventional structures and existing talent search conditions, both for new graduates and for mid-hires and executive search.

"Talent Operations Revamping Process", IBM Modern Talent Foundations[8]

As a result, Talent Acquisition operations became an area of primary focus, starting with talent sourcing and continuing with on-boarding processes and early engagement.

However, the Talent Operations team soon recognized the need for revamping the Talent Management structure as well, in order to be able to provide a modern and engaging employee experience to the newly acquired talent and the existing employees alike. Learning and Development became an area of immediate concern, as most learning programs were centralized and delivered to groups of twenty or more participants at a time

[7] Herman, Amy. E (2017), "Visual Intelligence – Sharpen Your Perception, Change Your Life", Mariner Books, Boston, page 274, paragraph 7.

[8] Internal material, "IBM Modern Talent Foundations", NTT Communication applications

at various opportunities and throughout different career stages. The new culture Yamamoto's team was working to install was relying heavily on personalization, customization and "work from anywhere" office mentality.

After analyzing existing market offerings, the team decided to work with IBM explore generative deep learning platforms and to develop an NTT customized version of IBM's "Your Learning" cognitive learning platform[9]. The new learning platform enabled all NTT employees to have access to learning materials, in terms of pre-set organizational learning, such as compliance training, and also individual learning aligned with personal interests. The new platform provided employees with automated suggestions to possible learning opportunities, such as on-line and e-learning, public video talks on YouTube and other external sites, and also with access to institutional learning opportunities provided by educational institutions all over the world, as the algorithm would recognize personal interests from previous learning sessions, on-line activity, pre-set career goals and career conversations with the management.

Along with the implementation of the cognitive learning platform, Yamamoto and her team studied other intelligent learning solutions. As part of their efforts to upgrade the digital learning environment at NTT Communications, they considered the implementation of a deep learning tool. Starting with a generative modeling initiative, they explored the foundations of a basis probabilistic generative model and analyzed which deep learning techniques would need to be implemented by who, when and how. After a deeper study of the deep learning structure and the existing enterprise architecture, the team concluded that the complexity of the generative task required a higher level of digital literacy throughout their organization and decided to proceed with an initial program of re-skilling and up-skilling the employee population in order to equip internal talent with the technological capabilities necessary for introducing and implementing deep learning initiatives. The IBM Japan team was called in to support with implementation of fundamental generative deep learning training modules and to help create frameworks for building neural networks that could later be used to construct and train advanced deep learning systems.

As part of the offering, IBM proposed in March 2018 considering the introduction of Robotic Process Automation (RPA) programs throughout the enterprise, in order to enhance productivity and work efficiency. IBM introduced UiPath – a Romanian RPA developer and a global technology partner of IBM – and recommended the implementation of RPA solutions for HR, Accounting and Operations. Yamamoto's team decided to begin with an RPA initiative for back office HR, in order to mitigate input mistake risk and to eliminate repetitive work. As an immediate application, RPA was introduced for business trip expense report filing processes and, within the span of two months from implementation, the team witnessed a 680% increase in HR operation efficiency[10].

In order to sustain the newly introduced initiatives, the team recognized the need to focus on developing and installing a common culture of innovation and growth. Yamamoto was keen at this stage to ensure that diversity of thought, aspirations and initiative is genuinely weaved globally into the emerging culture. As IBM Talent and Engagement Partner Hideki Ishida states on his interview on Globis Insights, "diversity a

[9] IBM Your Learning https://yourlearning.ibm.com/about/

[10] Comment extracted from the Focus Group Interview conducted with Yamamoto and her team on 2 July 2018.

core competency for innovation, for growth and meaningful transformation" [11] has the potential to engage and inspire growth.

Furthermore, Yamamoto worked with her team to ensure that diversity is weaved in every single layer of the organization, especially in internal learning activities. "Without a strong commitment to learning from diversity, we cannot talk about inclusion. It would merely be tolerance of differences, and that is not what we want at NTT."[12]

In order to solidify the culture of innovation, Yamamoto and her team agreed to roll out a global initiative in 2019 to further encourage NTT Communications associates to act upon this culture in daily business operations. New leadership competencies were developed and rolled out globally in order to install Emotional Intelligence (EQ) and Cultural Intelligence (CQ) practices across the business. The successful implementation of the new leadership was monitored through a matrix of leadership evaluation activities, which indicated a shy 36% embracement of the competencies globally as of January 2019, but a higher percentage of 58% percent globally as of May 2019.

Yamamoto's team of talent operators and organizational architects worked closely with Internal Communications associates and local HR and Communications teams in order to disseminate the global commitment to the development and full implementation of a culture of innovation at all layers of the business and in all regions of operations. The global HR and Communications teams soon recognized the need to "walk the talk" and to set new global standards through examples of success and to show concrete organization indications of the commitment to innovation and business transformation.

As a first set of initiatives, the teams agreed in May 2019 to apply ontological design transformative initiatives, such as re-creative office space and changing the atmosphere of the working environment in a visible and easily recognizable way to the business worldwide. They started with a combination of efforts, such as doing away with paper and moving to digital processes and continued with installing video messages through digital boards, projections and public screening in shared spaces, such as entrance lobbies, elevators, cafeterias and corporate display areas.

In order to prevent hedonic adaptation, Yamamoto's team worked with NTT Communications around the world to change the work environment by introducing "free address" desks, offering the employees the opportunity to work from any part of the office, or any other location, at any time of the day.

V. Conclusion

Modern Technology is able to support organizational transformation in various ways, forms and patterns. This is not a new phenomenon either. Organizations all over the world, and, especially Japan based or Japan originated businesses such NTT Communications, are constantly exploring modern ways of engaging talent and creating sustainable organizational structures beyond cultural, linguistical and geographical boundaries.

Yamamoto's team of talent operators and organization architects realized that the implementation of modern technology alone, though, does not guarantee the success of global business transformation. It needs be combined with social engineering efforts and a

[11] "IBM Japan: The Courage to Be Different", Globis Insights (2018) https://e.globis.jp/tech-innovation/ibm-japan-innovation-and-the-courage-to-be-different/

[12] "Diversity at NTT: How to Manage a Japanese Global Business in a Changing Age", Globis Insights (2019). https://e.globis.jp/global-japan/diversity-at-ntt-how-to-manage-a-japanese-global-business-in-a-changing-age/

commitment to developing, nurturing and sustaining a culture of innovation throughout the organization globally.

The following main results could be observed throughout the innovation culture installation process:

① The involvement of the whole teams of talent operators, organization architects and corporate communicators at an early stage in the process brought a diverse perspective on implementation initiatives and created early engagement and commitment of key players in the business transformation process.

② Early cross-divisional collaborations enhanced organizational buy-in and created a base for later roll-out initiatives and communications

③ Japan based talent operators can play key innovative roles in developing and deploying corporate culture and value penetration when diversity of thought is engaged at an early stage

④ An early involved of employees from all sides of the business in the culture dissemination process as well as in the process of on-boarding new technology helps with early acceptance and adoption of this technology throughout the organization.

⑤ The introduction of digital technology without a clear strategy for implementation intimidates employees and creates confusion in the organization. Oppositely, a phased approach to implementation combined with appropriate training and technological support leads to an early adoption of the new technology and the enhancement of creative confidence throughout the organization.

⑥ Although the series of organizational architecture development proposals and cultural integration projects were new to the company, projects which were visually engaging and simple to connect with were generating innovative ideas propelled the diversity of thought and aspirations of the participating associates.

The innovation culture development and implementation activities benefitted NTT Communications in their efforts to revamp talent operations and organizational innovation practices globally, through their focus on early engagement of key organizational players locally and regionally, as well as through their commitment to adopting and installing new technology and social engineering practices throughout the business. The new technology eased the way for organizational culture integration by enhancing the opportunities for cross-cultural communications and by automatically bringing down organizational silos through the enablement of innovative processes.

Reference Materials

Ahron, D.; Bison, P.; Bughin, J.; Chui, M.; Dobbs, R.; Manyika, J. & Woetzel, J. (2015) The Internet of Things: Mapping the Value Beyond the Hype. McKinsey. Retrieved from: https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/McKinsey%20Digital/Our%20Insights/The%20Internet%20of%20Things%20The%20value%20of%20digitizing%20the%20physical%20world/The-Internet-of-things-Mapping-the-value-beyond-the-hype.ashx

Alma'aitah, M.A.; Aljamal, W.H. & Al-Shalabi, F.S. (2013). Talent Management and Competitive Advantage: The Moderating Effect of Knowledge Integration. International Journal of Computer Applications (0975-8887) Volume 66- No.11.

Retrieved from: https://pdfs.semanticscholar.org/57a9/55e8d0454dff19ac6a76d454bc572a74f38f.pdf

D. Bass, Carla (2016), "Write to Influence! Personnel Appraisals, Resumes, Awards, Grants, Scholarships, Internships, Reports, Bid Proposals, Web Pages, Marketing, and More", Amazon Kindle

Bermudez, Jose L. (2018), "Cognitive Science – An Introduction to the Science of the Mind", Cambridge University Press, Cambridge.

Bradley, J.; Loucks, J.; Macaulay, J.; Noronha, A. & Wade, M. (2015). Digital Vortex. How Digital Disruption is Redefining Industries. CISCO. Retrieved from: https://www.cisco.com/c/dam/en/us/solutions/collateral/industry-solutions/digital-vortex-report.pdf

J. Carey, Marcus & Jin, Jennifer (2019), "Tribe of Hackers", Threatcare Press, Austin.

Deuze, Mark (2009). "Journalism, Citizenship, and Digital Culture", in Z. Papacharissi (ed.) Journalism and Citizenship: New Agendas. New York, Lawrence Erlbaum/Taylor and Francis.

Dobbs, Richards; Manyika, James; Woetzel, Jonathan (2016), "No Ordinary Disruption – The Four Global Forces Breaking All the Trends", Public Affairs, New York.

Dweck, Carol S. (2017), "Mindset", Robinson, London.

Forbes (2018-09-26), "The World's Largest Companies", Jersey City.

Foster, David (2019), "Generative Deep Learning – Teaching Machines to Paint, Write Compose and Play", O'Reilly, Sebastopol (CA).

Gerrish, Sean (2018), "How Smart Machines Think", The MIT Press, Massachussetts.

Hadnagy, Christopher (2018), "Social Engineering – The Science of Human Hacking", John Wiley & Sons, Inc., Indianapolis.

Herman, Amy. E (2017), "Visual Intelligence – Sharpen Your Perception, Change Your Life", Mariner Books, Boston.

Hofstede, G. (2019). Country Comparison: What About Japan? Accessed 5 September 2019 from: https://www.hofstede-insights.com/country-comparison/japan,the-usa/

Hofstede, Geert, Hofstede, Gert Jan, Minkov Michael (2010), "Cultures and Organizations: Software of the Mind", Mc.Graw-Hill, New York

IBM official website, "Lenovo Completes Acquisition Of IBM's Personal Computing Division", 01-05-2015. https://www-03.ibm.com/press/us/en/pressrelease/7641.wss

Lacity, Mary C., Willcocks, Leslie P. (2018), "Robotic Process and Cognitive Automation", SB Publishing, Stratford-upon-Avon.

Livermore, David (2010), "Leading with Cultural Intelligence: The New Secret to Success", American Management Association, New York

Livermoore, David (2016), "Driven by Difference", American Management Association, New York

McCelland, J.L., and Jenkins, E. (1991), "Nature, nurture, and connectionism: Implications for connectionist models of development". In K. van Lehn (ed.), "Architectures for Intelligence: the 22nd (1988) Carnegie Symposium on Cognition", Hillsdale, NJ: Laurence Erlbaum.

Meyer, Erin (2016), "The Culture Map (INTL ED): Decoding How People Think, Lead, and Get Things Done Across Cultures", Public Affairs, New York

Morgan, Jacob (2012), "The Collaborative Organization", Mc. Graw-Hill, New York.

Murakami, Y. (2019). End of Heisei Era and lifetime empoyment. Japan Times. Retrieved from: https://www.japantimes.co.jp/opinion/2019/05/02/commentary/japan-commentary/end-heisei-era-lifetime-employment/#.XXFK2hrTWfA

Nishimura, I. (2018) Current Status of Talent Management in Japan. Japan Institute of Labour. Retrieved from: https://www.jil.go.jp/english/jli/documents/2018/005-06.pdf

Pink, Daniel H. (2018), "WHEN – The Scientific Secrets of Perfect Timing", Riverhead Brooks, New York.

Phillips, Angela (2010), "Old Sources: New Bottles", in Natalie Fenton (ed.), New Media, Old News. Journalism & Democracy in the Digital Age, Los Angeles, Sage Publications.

Tapscott, Don. 2008. Grown Up Digital: How the Net Generation is Changing your World, New York, McGraw Hill.

Powell, M. (2016). Human Resource Management Practices in Japan: Are they really changing? Australian National University. Retrieved from: http://press-files.anu.edu.au/downloads/press/n2328/pdf/ch09.pdf

Rofaida, R. (2016). Competitive Advantage through Talent Management. Atlantis Press. Advances in Economics, Business and Management Research, Volume 15. Retrieved from: https://www.atlantis-press.com/proceedings/gcbme-16/25865988

Sejnowski, Terrence J. (2018), "The Deep Learning Revolution", The MIT Press, Cambridge, Massachusetts.

Small, Ivan V. (2019), "Currencies of Imagination", Cornell University Press, Ithaca and London.

Vlad, Cristian and Ishida, Hideki (2018), "IBM Japan: Innovation and the Courage to Be Different", Globis Insights, Tokyo. https://e.globis.jp/tech-innovation/ibm-japan-innovation-and-the-courage-to-be-different

Vlad, Cristian and Watahiki, Nobumichi (2014), "Creativity and Innovation Management Case Study on T Automobile's Innovation Management Program: Creativity Development and Methodology"., *Association for Regional Education and Culture* (AREC) No.2, pp.18-25

Vlad, Cristian and Yamamoto, Kyoko (2019), "Diversity at NTT – How to Manage a Japanese Global Business in a Changing Age", Globis Insights, Tokyo. https://e.globis.jp/global-japan/diversity-at-ntt-how-to-manage-a-japanese-global-business-in-a-changing-age

Yamamoto, I. (2017). The Need for Work Style Reform in Japan & Its Impact. Japan Spotlight. Retrieved from: https://www.rieti.go.jp/en/papers/contribution/yamamoto/data/04.pdf

Yin, Robert(2003), *Case Study Research: Design and Methods*, SAGE Publications, Inc; Third ed

Zimmerman, M. (1985). How To Do Business With The Japanese. New York: Random House. Print (page 120).

Additional References:

OECD (15 April 2019) OECD Economic Survey of Japan. Retrieved from: https://www.oecd.org/economy/surveys/OECD-Economic-Surveys-Japan-2019-PTT-English.pdf