# REMOTE WORKING AND TOGAF: ARCHITECTURE VISION

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**ABSTRACT**

*The COVID-19 pandemic, which implements social distancing, has led to the emergence of new habits in carrying out work with remote working models such as WFA (Work from Anywhere) or WFH (Work from Home). Challenges in implementing remote working, both from the human resources and technology aspects, require adaptation processes. How an organization prepares its IT enterprise architecture to support the WFA process to run smoothly is crucial. On the other hand, limitations in resources and organizational focus will influence decisions in determining which technologies will be used and implemented in the organization and what obstacles may arise in the implementation of WFA and what new technologies the organization will use, whether they will use open source or internal source starting from the process of developing new systems.*

## INTRODUCTION

COVID-19, which has been ongoing since 2019, and based on the official announcement by the President of the Republic of Indonesia, the government officially declared the end of the Covid-19 pandemic status in Indonesia. Furthermore, the President stated that starting today, Wednesday, June 21, 2023, Indonesia is declared to have transitioned from a pandemic to an endemic phase. With this condition, both public and private sector employees will adjust how company operations are conducted in the endemic era. Whether to continue using remote working or with mechanisms such as WFA (Work from Anywhere) or Hybrid remote working (Bernstein et al., 2020). Adjustments to new work methods currently require support both in terms of technology and the readiness of human resources in the company. Companies may choose to continue using hybrid methods to maintain team or HR solidarity within the organization. During the pandemic, all

organizations, regardless of the conditions they faced, made adjustments and adaptations to survive or to emerge from a situation filled with uncertainty (Anderson & Kelliher, 2020). Organizational leaders followed government regulations when implementing PSBB (Large Scale Social Restrictions) or social distancing, where individuals' movements began to be restricted, and this is where the ability to adapt to new technologies and work habits emerged (Desilver, 2020). Before the pandemic, especially in the Jakarta-Bogor-Depok-Tangerang-Bekasi (Jabodetabek) area, everyone commuted to the office using either private or public transportation. There was a rooted culture that work was done at the office before the pandemic, and during the pandemic, work mechanisms shifted to being done at home (Atkins, 2020). This situation was challenging for some individuals, especially those with families, who were not accustomed to the new habit of working from home, sometimes facing disturbances from family members.

Motivation for conducting this research:

- Background: The ongoing COVID-19 pandemic for more than 2 years has led to remote working being implemented in every company as a means of adhering to regulations and slowing the spread of the COVID-19 virus by maintaining social distance.
- Problem: The implementation of WFH and WFA during the pandemic has led to new habits in carrying out work and adapting to new technologies to support work. Not all individuals find it easy to carry out remote working activities, especially concerning the environment, support, and support related to speed, working hours, work attire, and communication etiquette.
- Opportunities: With the WFH and WFA working models, what new opportunities can arise or be created to accelerate or facilitate work models, work processes, or support new work cultures.
- Objective: This research is expected to provide information to stakeholders and readers about the conditions and situations of implementing remote working during the pandemic and can be used as a reference or guide in running businesses. What opportunities may arise with remote working activities, related to location, work support tools, applications, or supporting systems that can help individuals work and communicate with coworkers.
- Benefits or outcomes: With this research, readers will gain information about what employees need to carry out remote working and what work cultures need to be built within the organization (Panuluh & Gilang, 2019).

## RESEARCH METHOD

### Benefits and Challenges of WFO and Remote Working

While carrying out remote working, we, as social beings accustomed to interacting in our daily work routines, especially in jobs that require interaction or face-to-face communication with customers or clients, face challenges in how internal company coordination and communication occur in conveying information and making decisions from the top level of the company to the execution level (Mustajab et al., 2020). During the pandemic, several conditions and rapid adjustments have led to changes.

*Positive Aspects of WFH*

| Category | Total | % |
|---|---|---|
| Time-saving on commute | 41 | 44% |
| Flexibility | 32 | 34% |
| Transportation budget savings | 14 | 15% |
| None | 5 | 5% |
| Comfortable | 1 | 1% |
| Increased responsibility | 1 | 1% |
| Grand total | 94 | |

Regarding the conditions of remote working with the WFH method, respondents state that with WFH, they save more time on their commute. This can be felt especially by workers in Jabodetabek, where commuting to and from work usually takes between 2 to 4 hours per day (Nasution & Rosanti, 2020). This is considered positive as the time usually spent on commuting can be used for other more positive activities, such as spending time with family, interacting with the environment, or self-development. Another significant benefit is that with WFH, transportation budgets can be automatically reduced or reallocated for other purposes, such as savings, self-development, or other positive investments (Mungkasa, 2020).

*Negative Aspects of WFH*

| Category | Total | % |
|---|---|---|
| Less face-to-face interaction | 16 | 17% |
| Lack of focus and distractions | 14 | 15% |
| Overworking | 11 | 12% |
| Unclear and inefficient communication | 10 | 11% |
| Reduced socialization | 10 | 11% |
| Lack of engagement | 6 | 6% |
| None | 4 | 4% |
| Difficult to control | 3 | 3% |
| Lack of responsibility | 3 | 3% |
| Less effectiveness | 2 | 2% |
| Internet or power outage | 2 | 2% |
| Internet costs | 2 | 2% |
| Pending tasks | 1 | 1% |
| Less face-to-face interaction & Need for supervision | 1 | 1% |
| Lack of responsibility | 1 | 1% |
| Lack of trust | 1 | 1% |
| Audience information absorption capability | 1 | 1% |
| Slow coordination | 1 | 1% |
| Eye and shoulder health issues | 1 | 1% |
| Laziness | 1 | 1% |
| Boredom | 1 | 1% |

| | | |
|---|---|---|
| Impromptu meetings | 1 | 1% |
| More meetings | 1 | 1% |
| Grand total | 94 | |

Respondents indicate several negative aspects of WFH, including obstacles for jobs that require interaction and face-to-face communication, particularly for the baby boomer generation accustomed to in-person interactions for message delivery and not used to using technology for communication (Mea & Hyronimus, 2020). The stigma in society that work should be done at the office, not at home, is still prevalent. For example, family members accustomed to working in the office or outside the home every day may face difficulties adjusting to working from home. Additionally, the presence of family members at home, whether on holiday or not working, or family members engaging in other activities at home, or the absence of a dedicated workspace, poses challenges, especially for jobs that require high precision (Shagvaliyeva & Yazdanifard, 2014).

Furthermore, without clear rules and regulations from the office regarding communication during WFH, some individuals may struggle if they are not used to being contacted outside working hours, leading to slow response times or communication difficulties. However, with clear guidelines regarding working hours and communication times, as well as the ability to differentiate the urgency of information, these challenges can be anticipated. As social beings, humans thrive on socializing and interacting with colleagues or teams to maintain engagement and boost productivity and employee motivation (Pathak et al., 2019).

**Positive Aspects of WFA**

| Category | Total | % |
|---|---|---|
| Flexibility | 56 | 60% |
| Freedom to choose workplace | 14 | 15% |
| None | 6 | 6% |
| Multitasking | 2 | 2% |
| Flexible work location | 2 | 2% |
| Generating new ideas | 2 | 2% |
| No boredom | 1 | 1% |
| Cost-saving leisure time | 1 | 1% |
| Uninterrupted work and family time | 1 | 1% |
| Working while traveling | 1 | 1% |
| Internet or power outage | 1 | 1% |
| Varied workplace | 1 | 1% |
| Safe from COVID-19 | 1 | 1% |
| Working during holidays | 1 | 1% |
| Time-saving | 1 | 1% |
| Time management | 1 | 1% |
| Relaxed work atmosphere | 1 | 1% |
| Freedom of time and location | 1 | 1% |
| Same as WFH | 1 | 1% |

| Grand Total | 94 | |
|---|---|---|

From the questionnaire data filled out by respondents, it is stated that in implementing remote working with the WFA method, there are positive aspects such as flexibility in many aspects, not only in terms of time or location but also the ability to perform multiple activities simultaneously. This positive aspect needs to be supported by high responsibility and commitment to quick response and easy accessibility during working hours. High flexibility needs to be accompanied by effective time management, self-commitment, and high self-leadership to overcome disturbances, such as those from family or the environment, which are beyond our control (Lee & Joseph Sirgy, 2019).

**Negative Aspects of WFA**

| Category | Total | % |
|---|---|---|
| Internet network | 16 | 17% |
| Many disturbances | 11 | 12% |
| None | 11 | 12% |
| Time management | 7 | 7% |
| Lack of responsibility | 6 | 6% |
| Need for definite scheduling to go to the office | 5 | 5% |
| Difficulty in coordination | 5 | 5% |
| Suboptimal work performance | 4 | 4% |
| Increased meal costs | 4 | 4% |
| Increased spending budget | 4 | 4% |
| Communication problems | 3 | 3% |
| Reduced socialization | 3 | 3% |
| Lack of interaction | 2 | 2% |
| Lack of coordination | 1 | 1% |
| Work mood must be regulated | 1 | 1% |
| Lack of career ladder | 1 | 1% |
| More meetings | 1 | 1% |
| Difficulties in supervision | 1 | 1% |
| Weather constraints | 1 | 1% |
| Low work commitment | 1 | 1% |
| Adaptation | 1 | 1% |
| Pending tasks | 1 | 1% |
| Location | 1 | 1% |
| Missed tasks | 1 | 1% |
| Social judgment | 1 | 1% |
| Disturbance of work-life balance | 1 | 1% |
| Grand Total | 94 | |

Like the positive aspects, WFA also has negative aspects, such as internet network issues affecting communication. If the internet is unstable, misinformation

can occur, affecting work results. External disturbances or environmental factors beyond our control are also concerns raised by respondents, impacting delayed or unfinished tasks, leading supervisors or superiors to perceive delayed work hours or pending tasks. Face-to-face meetings replaced by virtual meetings using various software or applications pose challenges for individuals and organizations to adapt. Different generations in an organization, from baby boomers to Generation Z, have their own characteristics and challenges in adapting to remote working, considering their varying technological proficiency and work preferences (Lisanti, 2014).

For individuals, returning to office routines or WFO after the pandemic may pose challenges such as traffic congestion, long commuting distances, resulting in less effectiveness in WFO activities. During the approximately two years of the COVID-19 pandemic, individuals who had become accustomed to working from home faced challenges and routines that were not experienced in the years before COVID-19. Long travel times and the need to be at the office before 8 a.m., inevitable traffic congestion, and some individuals feeling comfortable working from home all pose challenges (Khotimah, 2021). It is essential for organizations to build a culture that can adapt to WFO methods, possibly through events or activities such as group exercise, changing or swapping seating positions, or workspace locations within a company or organization to prevent boredom or monotony in WFO activities.

Different individuals have their own motivations for remote working or WFA, such as flexibility or the ability to move around, avoiding boredom. Besides motivation, a high level of awareness is crucial for each individual in an organization to have discipline, responsibility, commitment, and good ethics in working, communicating with internal or external colleagues, minimizing disturbances and communication barriers. Implementing remote working requires systems or technologies that facilitate communication, sending messages, or required documents according to each individual's job desk or task.

## RESULT AND DISCUSSION

### Requirements for Optimal Remote Working

During remote working, especially for employees or workers, supportive tools, both software and hardware, are necessary to facilitate work. Several supporting needs are related to communication, documentation, and integration. During the COVID-19 pandemic, some organizations prepared systems for communication and file/document storage. There are commonly used systems such as Zoom, Google Meet, Microsoft Teams, Slack, Jira, Trello, and Google Drive used for organizing data and communicating among individuals within the organization. Of course, these applications require supporting devices such as PCs, laptops, smartphones, or tablets with sufficient capacity and capability to perform operational functions simultaneously, such as running Zoom while opening notes or other documents to expedite the work process (Green et al., 2020). With the presence of these technological devices, work becomes clearer and communication and completion are faster.

In 2014, Nicholas Bloom stated in the Harvard Business Review that implementing work from home could increase employee productivity because employees

can have high flexibility and lower pressure with a warm and calm atmosphere at home. Many policies are implemented by companies to ensure that their employees maintain productivity while working from home. One of them is by implementing a Result-Oriented Work Environment (ROWE), where IBM employees are free to work from anywhere but still collaborate and communicate with other employees through collaborative software (Purwanto et al., 2020).

However, it cannot be denied that ensuring productivity during work from home is difficult in developing countries like Indonesia. Technological sophistication is one of the essential determinations to control employee productivity while working from home, and this is a challenge faced by many companies today. Additionally, working from home during a pandemic undoubtedly carries different pressures. The meaning of the term work from home has become very literal, which means employees are indeed asked to work from home only to help prevent the spread of COVID-19. As a result, employees are burdened with boredom and ultimately find it difficult to maximize productivity. A study conducted by Robert Walters Japan (2020), a Specialist Recruitment Firm, on 501 companies implementing WFH in Japan, found that 30% of employees experienced decreased productivity. Interestingly, three main causes were identified, including difficulty in communicating with colleagues and clients, difficulty in concentration management, and technical issues that occurred while working from home.

To ensure that remote working runs smoothly, it is necessary to have company regulations that regulate the mechanism of remote working, such as having a routine schedule for offline meetings, having alignment of vision or goals within small teams, departments, or divisions. For the success that is indeed a common goal within the department or organization, simple celebrations are held to maintain engagement and interaction among employees. Learning together in the use and adaptation of new technology to support work, such as discussing application guides, or performing new tasks together to identify obstacles and challenges in using new applications or technologies.

Explain what needs to be prepared or done to ensure that remote working can run optimally, including how to overcome the challenges experienced during remote working.

**TOGAF**

The Open Group Architecture Framework or TOGAF Framework is a framework that can be used to develop the architecture needed to meet business requirements. As an enterprise architecture methodology, TOGAF offers a high-level framework for the development of enterprise software. Initially developed by The Open Group in 1995, TOGAF was used by 80% of Global 50 Companies and 60% of Fortune 500 Companies as of 2016.

TOGAF has several pillars, including:
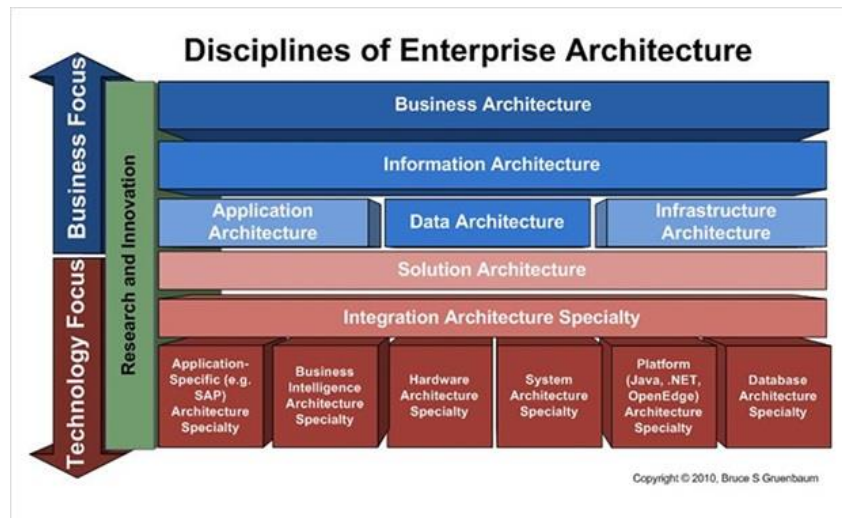
- Business Architecture: Describes information on business strategy, governance, organization, and how to adapt to existing processes within an organization.
- Applications Architecture: A design plan for structuring and deploying application systems, related to business objectives, other organizational frameworks, and all root business processes.
- Data Architecture: Activities defining organizational data storage, management, and maintenance, including logical and physical data models.
- Technical Architecture: Description of all hardware, software, and IT infrastructure required in the development of business applications.

Advantages of TOGAF include:
- Being open source, making it flexible to use.
- Implementing structured and organized software technology.
- Being able to create a systematic approach to development processes that can be replicated with minimal errors.
- Having a wealth of materials that can be used for enterprise architecture by new and experienced architects.

Some software that can be used for TOGAF includes:
- Alfabet AG: planningIT 7.1 and later
- Avolution: ABACUS 4.0 or later
- BiZZdesign: BiZZdesign Enterprise Studio
- BOC Group: ADOIT
- Orbus Software: iServer Business and IT Transformation Suite 2015 or later
- Planview: Troux
- Software AG: ARIS 9.0 or later
- Sparx Systems: Enterprise Architect v12

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Remote Working and TOGAF: Architecture Vision

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- https://itgid.org/togaf-framework/
- https://itgid.org/togaf-indonesia/

The TOGAF Framework - Launched in 2009, The Open Group Architecture Framework or TOGAF is a framework and development method for Enterprise Architecture used by enterprise architects to design, plan, implement, and manage organizational architecture. TOGAF 9 Certification is considered an industry standard framework and methodology for enterprise architecture practice. Why adopt TOGAF for your organization? More than 20,000 people worldwide have taken accredited TOGAF courses so far.

The TOGAF 9.1 Framework was released on December 1, 2011, containing several updates to TOGAF 9. The TOGAF Version 9 Framework was launched in 2009 and has since become the global de facto standard for Enterprise Architecture, adopted by over 80% of the world's leading companies, with thousands of individuals, teams, and training organizations pursuing TOGAF certification every year. This is partly because there are several international organizations with the infrastructure to build new disciplines, such as enterprise architecture. And partly because there was no single agreed-upon approach to enterprise architecture until TOGAF arrived on the scene. At the heart of TOGAF is the ADM (Architecture Development Method). The ADM is the result of continuous contributions from a large number of architecture practitioners. It describes a method for developing the enterprise and forms the core of TOGAF.

**The Phase of TOGAF Assigned**

In the vision architecture phase of TOGAF, it creates a common understanding of the importance of enterprise architecture to achieve organizational goals formulated in the form of strategies and determines the scope of the architecture to be developed. This stage contains questions asked to obtain the ideal architecture. This phase is the initiation phase of the architecture development cycle, which includes defining scope, identifying stakeholders, formulating architectural vision, and obtaining approval to start architecture development.

Some objectives of this phase are:

- Ensure that the evolution of the architecture development cycle is recognized and supported by enterprise management.
- Formalize business principles, business goals, and organizational strategic movements.
- Define the scope and identify and prioritize components of the current architecture.
- Define the business needs to be achieved in this architecture effort and its boundaries.
- Generate an architectural vision that demonstrates responsiveness to needs and boundaries.

**Analysis of How the Assigned Phase of TOGAF Relates to Remote Working**

From the TOGAF vision architecture phase, it provides information from questionnaire results that in response to the conditions of remote working, it is necessary to explain the vision of the organization and future business, what resources will be retained, and which phase will be developed. Stakeholders in the organization will be interviewed to see their perspectives on future business plans so that the current conditions of remote working can be adjusted and implemented in line with the external and internal conditions of the organization or company.

In the vision architecture phase, it is important at the outset to create an enterprise business framework in the organization with the ability of shareholders while also balancing aspirations from employees. In designing the remote working framework, it is important to consider the budget and readiness of human resources. For example, is the organization a service company where physically staff are not required to be present in the office all the time, or only certain administrative parts need to be in the office, and a WFO schedule can be created, for example, 2 activities can be done at home in 1 month. This needs to be considered and becomes a policy in the company and organization so that business activities can continue smoothly, but some WFH cases can be accommodated, for example, 1-2 times in 1 month without cutting leave.

How much budget is provided by the organization to build a new culture and combine it with the technology tools built for employees, such as procuring PCs, laptops, tablets, or smartphones, and how to mechanize control over that infrastructure. In running the organization, how is this remote working method in managing working hours, determining rewards and punishments, rules, and ethics in working, for example, whether it is necessary to dress properly or wear a shirt during remote working. Because this can also affect or create jealousy among other employees who are unable to work remotely. Analysis of the relationship between the assigned TOGAF phase and remote working. This can be done in 2 ways:

1. Discussion of relevant literature related to the intended phase and remote working.
2. Analysis of TOGAF documents for the intended phase and how that phase supports remote working.

**Synthesis of Recommendations, Architecture, or Best Practices to Support the Success of This Phase in Remote Working**

Based on the questionnaire results regarding the positive and negative aspects of remote working and various technologies used by respondents, it is evident that remote working activities that can be utilized include WFH with attention to supporting facilities such as laptops and internet access. To support remote working activities, policies from the company are needed to regulate the implementation of remote working, which has obtained approval and information from the company's top management. Is the company's vision for the next 2-5 years still intact, and what is the macro situation and overall industry conditions? How do competitors utilize remote working models? How to manage and calculate employee productivity, and

how to create a culture of work and high commitment in implementing remote working.

Several steps to be taken in this phase include:

- Determining the project.
- Identifying business goals and movements. If this has been defined, ensure that this definition is still appropriate and clarify any unclear parts.
- Reviewing architecture principles, including business principles. Reviewing this is based on the current architecture being developed. If this has been defined, ensure that this definition is still appropriate and clarify any unclear parts.
- Defining what is inside and outside the scope of the current business.
- Defining limitations such as time, schedule, resources, and so on.
- Identifying stakeholders, business needs, and architecture vision.
- Developing a Statement of Architecture Work.

## CONCLUSION

With the current concept of remote working research that is ongoing post-pandemic, it certainly has an impact on both individuals and organizations. This includes organizational culture, individuals, and the technology used to support work processes, where technology architecture based on TOGAF is needed, utilizing initial information on the condition of remote working and using TOGAF architecture for the implementation process of information technology usage. Considering from the human side, several aspects need to be considered in carrying out remote working, such as location, schedule, and of course, internet access to facilitate communication.

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