



# SELECTING EFFECTIVE COLLABORATIVE TOOLS FOR CREATING A NEW SOCIAL NETWORK IN THE COMPANY FOR RAISING EMPLOYEE ENGAGEMENT DURING COVID-19 PANDEMIC

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## Abstract:

The development of the Covid-19 pandemic brought organisations the necessity to seek new strategies to retain employees' trust, empowerment, collaboration, and sense of loyalty to the company. Adaptive, durable, engaging, yet applicable in a remote environment were narrowly few of the requirements needed for this strategy to help successfully manage co-located teams, their progress, continuous learning, and sustain the motivation and devotion in different personalities within the group. This paper presents how we leveraged collaborative software tools using the shift to virtual work as a unique learning opportunity. Our results exhibit that remote teamwork entails several components to success: a personal and professional sense of belonging, sharing of knowledge and daily life content, and development of social networking at work as the central pillar to staying connected with co-workers. Work after pandemic and how the hybrid model of work will affect all organisations are some of the future research directions raised.

## Keywords:

Online Collaborative Tool, Remote Learning, Social Network, Distributed Teams, Work from Home.

## INTRODUCTION

With the Covid-19 pandemic acceleration in 2020, societies and organisations have experienced a full-scale effect on all aspects of professional and individual lifecycle. Following complete lockdown in many European counties, we have encountered numerous challenges from March 2020 to June 2020. Most responsible organisations transitioned fully to work from home (WFH). Nevertheless, WFH emerged as challenging on various levels: (a) for companies who had a mission to keep the workforce gathered, as well as for (b) employees who are not able anymore to experience the exact impact of organisational climate at home. Another consequence of pandemic is - lack of stability, which affects employees focus on work and their sense of well-being. Development of pessimistic feelings due to rising cases of COVID-19 in the world, global uncertainty daily makes job security questionable and their income, and other existential factors.

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Due to the listed problems, employee engagement became one of the main topics for discussion, being the primary building block of the modern organisation.

As presented in the paper [1], the digitalization of business processes is very important for every company and various industry sectors. While main goal of the company's business remained unchanged, which is to maximize profits, the use of information and communication technologies in company's business during the Covid-19 pandemic tended to grow.

The most important step for our software engineering company was to define and establish a clear communication and collaboration process within employees, team members, and their superiors and vice versa in times of enforced pandemic measures and absence of physical contact [2]. Lighting the spark with a top-down approach and waiting for other employees to join the board is how this strategy started.

Employees had no hybrid work experience, meaning full-time work from home was a completely new concept. Yet, they already encountered distributed teamwork with clients located in various countries.

Knowing how during pandemic engagement activities started to evolve, family gatherings moved from living rooms to online tools and chat rooms, virtual learning and development became exclusively online events, other educational/professional contents as webinars with industry experts became contactless.

As a response to the online life movement, our organisation pivoted by making daily, weekly and monthly internal events to keep employees connected, based on our previous experiences, expressed in two research papers, [3] and [4], we concluded that the main focuses should be on (1) Team building activities, (2) learning through knowledge sharing, (3) communication and collaboration. Some are online team buildings necessary to keep the work culture alive, sharing a meal over video conferences, short online game sessions, virtual challenges and competitions, online courses, communication exercises, live sessions for new-skill training, online counselling sessions, social interactions in a virtual office, and many more creative learning sessions.

### 1.1. BACKGROUND OF THE STUDY

Various articles explore work-from-home productivity during the Covid-19 pandemic by studying related literature. Still, there are not many that have a focus on employees collaboration and maintaining loyalty and intense bonds. This paper aims to emphasise the impor-

tance of keeping pace and adapting to emerging challenges the Covid-19 pandemic brought in the current state of work and future of work, presenting how we nurtured employee engagement.

In a paper [5], the authors point out that full-time remote work during the pandemic in Microsoft company caused a decrease in synchronous communication and an increase in asynchronous communication. Their results present that for employees, it was harder to acquire and share new information across the collaboration network. Listed are only some of why we choose Slack as one of the leading collaborative tools. The possibility for synchronous and asynchronous communication benefited employees who wanted to be actively involved in touch and passively.

In [6], the authors present that the biggest challenge of information technology companies in moving towards long term remote working is sustaining the organisational culture. This research explores the different corporate cultures adopted by top IT companies in India to understand how to motivate and retain employees in a remote work environment.

The paper [7] highlights the shift to virtual work as a unique learning opportunity, with findings demonstrating that teamwork entails several core activities (task, process, and relationship interactions) that require additional adjustments to enact in the virtual (vs collocated) environment successfully. Authors concluded that transition to an entirely virtual work environment and movement to online collaboration is the central postulate for nurturing close peer relationships that required constant adapting and Agile approaches in all work-related decisions during the pandemic.

### 1.2. RESEARCH FOCUS

Two main pillars of our research and paper are to present research results on what we learned from the organisational point of view regarding covid19 pandemic and shift to virtual work and how this new way of working impacted employees' performances, learning and overall engagement.

- RQ1. A strategic approach to people engaged in a virtual environment, how we did it and lessons learned?
- RQ2. How to make an individual approach for creating an intimate, engaging environment and increase personal motivation for attending inclusive activities?



**RQ3.** How to create a custom social network to engage employees of software engineering companies? How can collaborative tools and virtual mood of work contribute to knowledge sharing mechanisms in remote environments and their benefits?

Based on the experience of using social networks and collaboration tools within the company, we were compelled to react quickly at the beginning of the pandemic. When it was clear that it became a systematic phenomenon, we started to combine the usage of online collaborative tools to retain bonds and motivate people to stay together and connected. Tools used were already known to employees [8], but pandemics brought the need to use them on the advanced level. Optimal mix of their utilisation leads to one new notion - inter company social network has emerged, as the main instrument of communication which produced best results in engagement and keeping loyalty preserved of COVID effects.

A team of 200 engineers working on 15+ different projects with 10+ clients globally spread became the observed sample in this study:

- ◆ Over time, the so-called "carrier group" was profiled and was present at all sessions, 15% of which were non-stop active and helped other participants engage even better;
- ◆ 55% of employees participated in 60% of new social network activities;
- ◆ The remaining 10% were periodically included in online gatherings and virtual discussions; and
- ◆ After several months of observation, it was concluded that several people did not participate in the mentioned activities at all, about 20%.

Looking back at the figures mentioned, we can say that our main goal has been met. People collaborated, communicated and shared content and, most importantly, remained connected even though they were separated.

## 2. APPLIED APPROACH

The goal of our research was to identify a mix of existing collaboration tools in the shortest possible time, a few weeks after the beginning of the pandemic, that would cover the needs of increasing and communicating our engineers to create a natural office environment in cyberspace.

The challenge in front of us is to choose the winning set of communication and collaboration tools that most software engineers would accept. Although, as we know, a typical software engineer is technologically curious, he wants to try as many means of communication as possible. In brief, they are a target group that is not inclined to use one collaboration tool to cover all needs and communication channels.

The main direction of our research is focused on mapping the communication needs and experiences of employees using collaborative platforms that exist in the market. We use some of the collaborations platforms as part of the standard set required by the company (MS Teams, MS Outlook, MS SharePoint, etc.). In contrast, we have through the experience we gained working with our client's project teams (Atlassian Jira, Confluence, Slack, Zoom, etc.).

Our work aims to create an environment that supports the interactions of engineers in the workplace - in the office - in cyberspace. In solving the growing challenge, we wanted to avoid the typical trap set by employees in advanced technology companies, which is to approach synthesis, building a new collaboration-communication platform that would cover all the needs of our employees.

As a starting point, we adopted MS teams for the platform used for the broadest communication because the company required it for standard employee communication. Microsoft Teams is a proprietary business communication platform developed by Microsoft which has been used within our company as the primary communication tool within employees, for quick communications, besides the outlook email.

As email and messaging tools are often used and recognised to be appropriate for long term and external communication, which does not require an instant response and prompt engagement - the need arose to search for an alternative tool that will be a good substitute in the absence of physical contact and office small talks.

A tool that offered synchronous and quicker communication - with no restrictions regarding several groups, messages, and had easy access for all employees, was a perfect match. As Slack provides a possibility of having an unlimited number of private and public chat rooms dedicated to project teams or groups of enthusiasts, numerous free add-ins for communication advancement, the opportunity to schedule team meetings for a large number of people and more benefits - made us elect this collaborative tool to be the main point of communication and collaboration during remote work.



Yet tool could be unique to all, but the approach needed to be Individual and tailored. Employee engagement guarantees best results when adapted to individual needs, as different personalities respond differently to various engagement efforts. Within the company, we have developed a platform that helps creating candidate profiles in accordance with clients' requirements [9]. A new approach to attract each group of people to attend engaging sessions are presented in **Figure 1**.

Daily chat/video call sessions were organised via Zoom during the first month, used as Slack add-in. Zoom is a cloud-based peer-to-peer software platform used for teleconferencing, telecommuting, distance education, and social relations. It allows you to set up virtual video and audio conferencing, webinars, live chats, screen-sharing, and other collaborative capabilities.

Sessions lasted around 15 minutes and had the main goal for employees to share positive news, updates, and facts daily from different locations.

Challenge emerged with sessions that mainly contained private information about the employee. The data privacy issue was discussed, as many people have been using their social media accounts to share information from their day to day lives. Before sharing the information, pictures and other contents needed to be reviewed and decided in which form they will be shared. "Passion Sessions" were born.

Conceptually made to be 15 minutes session in which one individual presents their passion whether by adding pictures in ppt or offering it live on a video call- the choice is theirs. As a result, employees got to know each other better personally and started bonding on a friendly and professional basis. These sessions were one of the most visited. Therefore, more than 60 % of invited employees were attending them regularly; furthermore, as time progressed, more than 70% of employees saw every other passion session.

Employees with dominant interests in exclusively professional topics have been visiting mostly the "technical educational sessions" - presenters were agreed in advance as their topics of presentations, and this information has been published in internal slack channels. Besides socially connecting, in the discussion that followed the 15 minutes session, employees' knowledge base became larger as sessions progressed. Aftermath is vital because communication continued on separate open chat channels between 80% of attendees in the following months.

As a result, group chat rooms have become places where people express their thoughts, work-related problems, solutions from various perspectives, news from different locations worldwide, and shared funny daily content. People have felt the freedom to ask questions publicly or give their opinion.

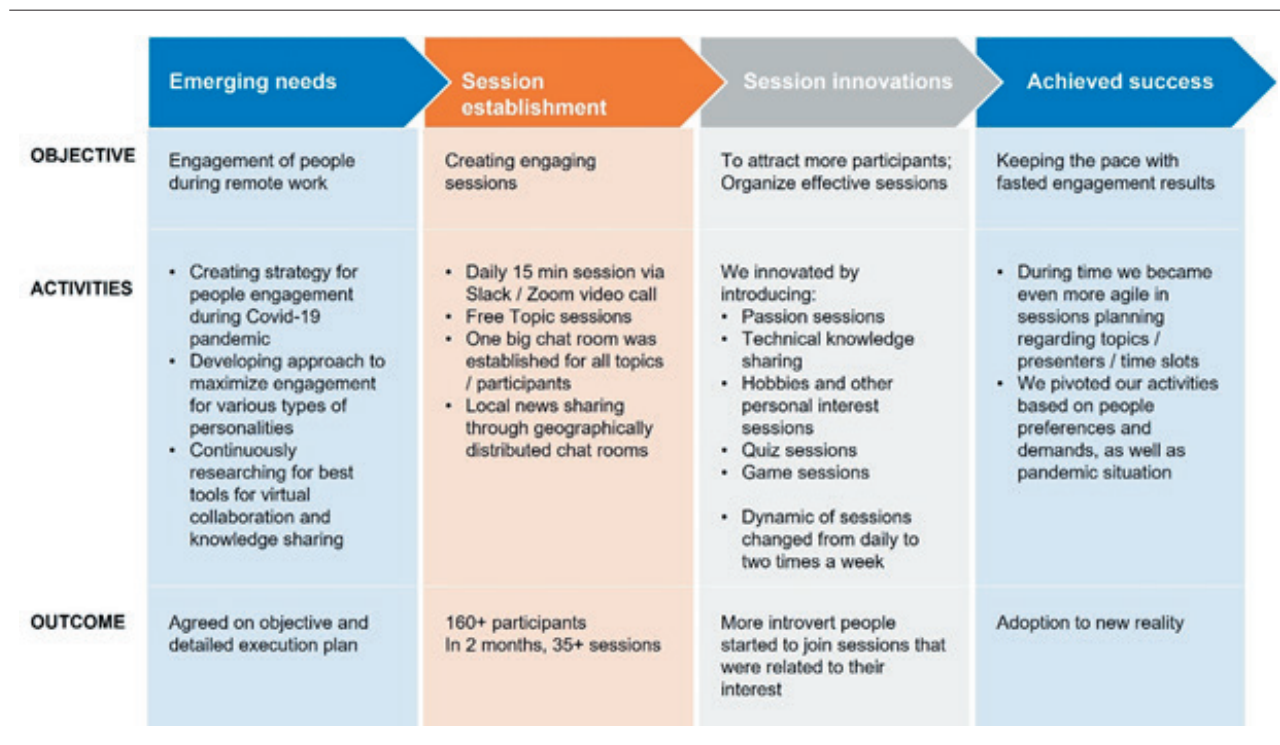


Figure 1 - Session establishment process



They became engaged even after the work hours, entirely voluntarily. After a few months, we had 20+ channels, each having 30+ people.

As engagement got more significant over time, we organised a once-week 15-minute quiz using Kahoot! A platform for all employees that were infested to attend. Kahoot! is a game-based learning platform used as educational technology in schools and other educational institutions. This practice has shown that even bigger engagement has been established because we had quiz winners and recognition. Therefore, motivation for attending was even more significant and, consequently, the people's attention.

Bi-weekly, all employees active in slack had a challenge set by Slack activates organisations. After two weeks, the best three responses would be chosen as a winner in different categories. Medals and recognition have been tailored made by organisers and publicly shared with the whole group, presented in **Figure 2**. People continued sharing this recognition on their social media and got feedback from other employees, which also positively impacted the process of engagement.

To make the environment in which people felt welcome to share different content and bond, small prizes as gestures of recognition were established.

Criteria for receiving the award were different, depending on each case. Our idea was that as many participants as possible, who were active in the sessions, or in communication on other channels, receive awards in different categories to recognise their efforts.

Therefore, a voting system was in place for the awards to be distributed.

Besides thematic sessions, employees were eager to have topic free sessions to have small talk and express themselves about their day-to-day life, challenges or positive news. Donut tool was introduced to a group of Slackers as Slack Ad-in. Therefore, we managed to stay within the established platform, yet one more innovation helped people meet and greet using their cameras. Dount works in the following principle - when someone on your Slack workspace sets up Donut, they'll choose the channel, frequency of intros (multiple times per week, once per weekly, biweekly, etc.), the time zone, and the time that the openings will go out. Donut tries to introduce people who don't normally interact with each other. It does this by looking at who is in which channels and matching people who aren't in many channels together. Donut also keeps track of who has been introduced in the past to avoid frequent repeats. Once more, we have leveraged the benefits of the Dount tool and increased the number of people who interacted and had fun in a short rendezvous.

Statements of people who used slack and Dounat also helped us understand its impact.



Figure 2 - Medals and recognitions



| Tool            | # Active People | The main purpose of use   |
|-----------------|-----------------|---|
| Microsoft Teams | 200             | Collaboration and meeting   |
| Email           | 200             | Communication   |
| SharePoint      | 200             | Sharing documents   |
| Slack           | 160+            | Chat rooms for various purposes (knowledge sharing & other personal topics) |
| Donut           | 100+            | Meeting new people through randomize choice of participants                 |
| Zoom            | 130+            | Meetings for knowledge sharing, passions session and thematic sessions      |
| Kahoot!         | 70+             | Quiz tool   |

Table 1 - Virtual collaborative tools engagement

### 3. RESULTS

When the pandemic started, we used different communication tools between employees, which led to the development of the company's social network.

**Table 1** presents usage of different utilized tools and what is the main purpose for each of them.

Achieved levels of employee engagement were reminiscent of large yet intimate team building in a dream location for people bonding.

As a result of constant collaboration and communication among employees at various thematic meetings, sessions, Slack and MS teams channels, an inter-company social network has been profiled.

Emerge of the internal social network brought various benefits to the employees, and consequently to the work culture and the sense of belonging even though people were distributed.

We periodically measured the satisfaction and interest of employees [10] and therefore pivoted the offer of existing activities and introduced new one's. For example, as a brand new event, introduced passion sessions at the explicit request of engineers who wanted to connect with a broader circle of participants by demonstrating their hobbies, achievements and ideas.

This network-enabled team-mates to be together and updated yet not all the time dependant. It empowered more communication through conference calls and influenced more knowledge, know-how documents and other files via SharePoint groups.

- ◆ 80% of total communication was generated on Slack. Participants could be up to date with news and posts, yet their constant engagement wasn't required;

- ◆ 10% of overall communication was through conference calls using MS Teams. Morning standups and weekly calls were the main places for gathering while audio and video chatting on different topics, from sharing passions and valuable knowledge to attending the online party; and
- ◆ 10% of all communications can be sorted in type "other". The main types of these communications were written and included exchanging emails, sharing various documents on share points (presentations, videos, educational materials, courses, books etc.)

The successful results in advancing the communication between co-located teams and achieving a goal: to give people a sense of belonging and stay loyal to the company even when there was an opportunity to work anywhere on the planet, we owe to an Agile way working. The constant need to adapt to human needs and listen to the signals they sent us during the pandemic helped us form different personalised approaches according to different personality types, requirements and want; all this has allowed us to reach people and make a strong bond.

**Table 2** presents a mix of different employee seniority needs and their competition. People who have felt more comfortable being involved and socialising more intensely in a work environment have retained this trait. Therefore, their involvement in all the mentioned activities was above 70% regarding all regular sessions. Also, people who sporadically participated in company initiatives and gatherings before the pandemic continued to be active in interesting content. On average, attended half of the regular sessions, about 50% of activity was marked. In the end, there is a third group, which we call lone wolves, which were sporadically included in only 20% of the sessions.



| Employee Seniority    | Type of engaging sessions |                 |                            |                 |                       |                 |                  |                |            |
|-----------------------|---------------------------|-----------------|----------------------------|-----------------|-----------------------|-----------------|------------------|----------------|------------|
|                       | Weekly Conference calls   | Virtual parties | Knowledge sharing sessions | Passion Session | Donut random meetings | Daily stand-ups | Slack chat rooms | Kahoot Quizzes | Zoom Calls |
| Junior engineer (0-3) | 80%                       | 90%             | 60%                        | 70%             | 70%                   | 50%             | 70%              | 70%            | 70%        |
| Medior engineer (4-7) | 50%                       | 40%             | 50%                        | 40%             | 50%                   | 70%             | 20%              | 50%            | 50%        |
| Senior engineer (7+)  | 20%                       | 10%             | 20%                        | 10%             | 10%                   | 10%             | 20%              | 0%             | 0%         |

Table 2 - Distribution of employees according to motivation to participate in social network and collaboration

This trend did not deviate much from their pre-pandemic behaviour. Still, they could also passively follow the events on the channel by indirectly involved through liking, post-reading, voting etc.

#### 4. BENEFITS

After conducting the results of employee engagement sessions, their visits, and individual involvement in communication and collaboration with other colleagues through the Slack chat group, we have determined that the group of active participants on thematic sessions grew by 50% from the moment of their implementation.

People whose interests were triggered by professional and personal topics attended almost 80% of the overall number of the sessions. A minority of these participants skipped sessions due to a lack of time or periodically overlapping the meetings. People whose interests were triggered by only personal or professional topics increased the number of visits to this specific session by 50% compared to the holidays before their introduction. Their communication after sessions also continued on dedicated knowledge sharing channels or other open format chat rooms for employees.

Feedback from anonymous surveys we conducted upon ending the pandemic showed that people noticed an advancement in their social skills and interactions with other people. Also, they shared that knowledge base built from technical educational sessions and channels for discussions on technical topics allowed them to advance their professional skills and work on new skills. This became a place for getting free training and top-notch experience from practice.

From the organisational point of view, we have learned that there is no one-fits-all approach to successful people engagement. We have managed to unify the distributed teams from 10+ countries worldwide; social isolation was banished, the distance was no longer a topic that bothered our employees.

#### 5. CONCLUSION

Considering the results of people engagement during a pandemic, we can conclude that face to face contact is essential for people to stay connected, but it's not crucial. It has become apparent that internet-based communication through many collaborative tools while having mediums who connect people has made a significant impact regarding innovation on the way of work.

Yet our research showed that people interactions could be as effective and successful as when all employees spent 100% of the work time on-site with colleges. With dedication and special attention to developing exceptional tailor-made solutions regarding individual requirements and personality types, we achieved results that reveal that people have also reached higher levels of connectivity in personal and professional terms than before the pandemic.

The thesis of productive work from home, while having a sense of belonging and still feeling work culture, has proven favourable. This leads us to further think about the future of work, which seems to be hybrid from this point of view. The fact that teams must come together to solve grand challenges, regardless of geographical or disciplinary separations, will still be a requirement for successful delivery of various software solutions.



Using a face-to-face model is essential when establishing trust within the team. However, more research is needed to determine “clear hybrid work mode” and the best distribution of virtual and face-to-face work required to achieve the best possible results. The probability is high that there will not be a “one-size fits all” solution when applying the hybrid model in different organisations. The most crucial aspect will be to have high levels of agility to pivot quickly and make tailor-made solutions in line with the company’s needs, team, individuals, and the global situation expected to be highly variable.

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