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Applied Topics/Guest Lectures

BUBBLE

Concept for an email
triaging system for
organizations, based on
Organizational Hierarchy
& Actor Network Theory

Concept for Hybrid Home

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PROBLEM

Electronic communication has revolutionized the way communications take place in professional setups. Over 183 billion emails were being sent and received everyday [1]. Post pandemic, to support the communication needs of work from home (WFH), asynchronous mediums like email and instant messaging became much more popular leading to huge volume of emails.

'Inbox flooding amidst hybrid working patterns cause interruptions in workflow and add stress'

Problem finding

Potential solution explorations

Conceptual Proposal

PROCESS

A thorough literature review was conducted to both find concrete insights on the cause of the problem and for exploration of solutions.

Key Insights:
Email stress is associated with volume of emails and frequency of attention towards email [2]

Handling of email stress is dependent on perceived importance, especially with old emails as well as the users personality [4]

Inter personal, group and organizational were the common levels found in organizations [6]
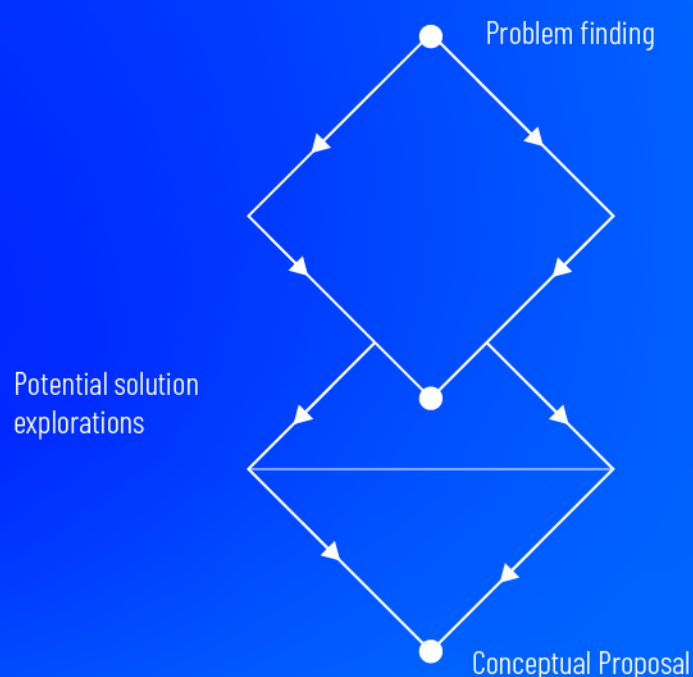
PROPOSAL

An email triaging system based on organizational hierarchy and ANT(Actor Network Theory), for a better experience of communication through the electronic mail, taking into consideration the hybrid working patterns.

1st priority

2nd priority

3rd priority
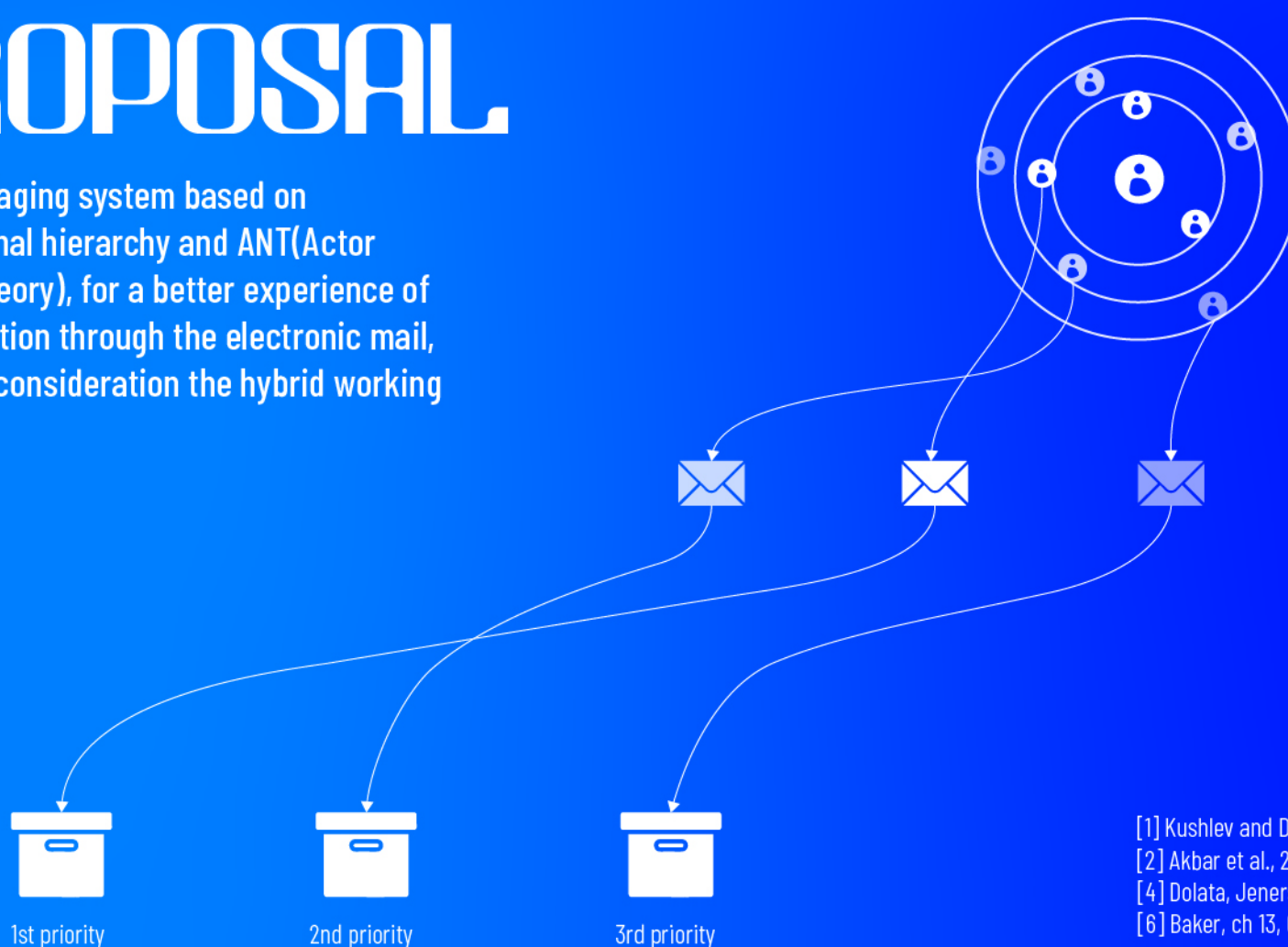
[1] Kushlev and Dunn, 2015
[2] Akbar et al., 2019
[4] Dolata, Jeners and Prinz, 2013
[6] Baker, ch 13, Organizational Communication 2020

1 SOCIAL & ENVIRONMENTAL IMPACT

Checking emails is the primary source of interruption as it is viewed as a task that requires continual attention [2]. As a continuation of social media triggered habits, it has now become a common behavior for many. With an increase of spam, and third party communications there would doubtfully be any person with an inbox that is all read [3].

Petal

Stem

Branch

CEO

Teams

Teams

Manager

Manager

Teams
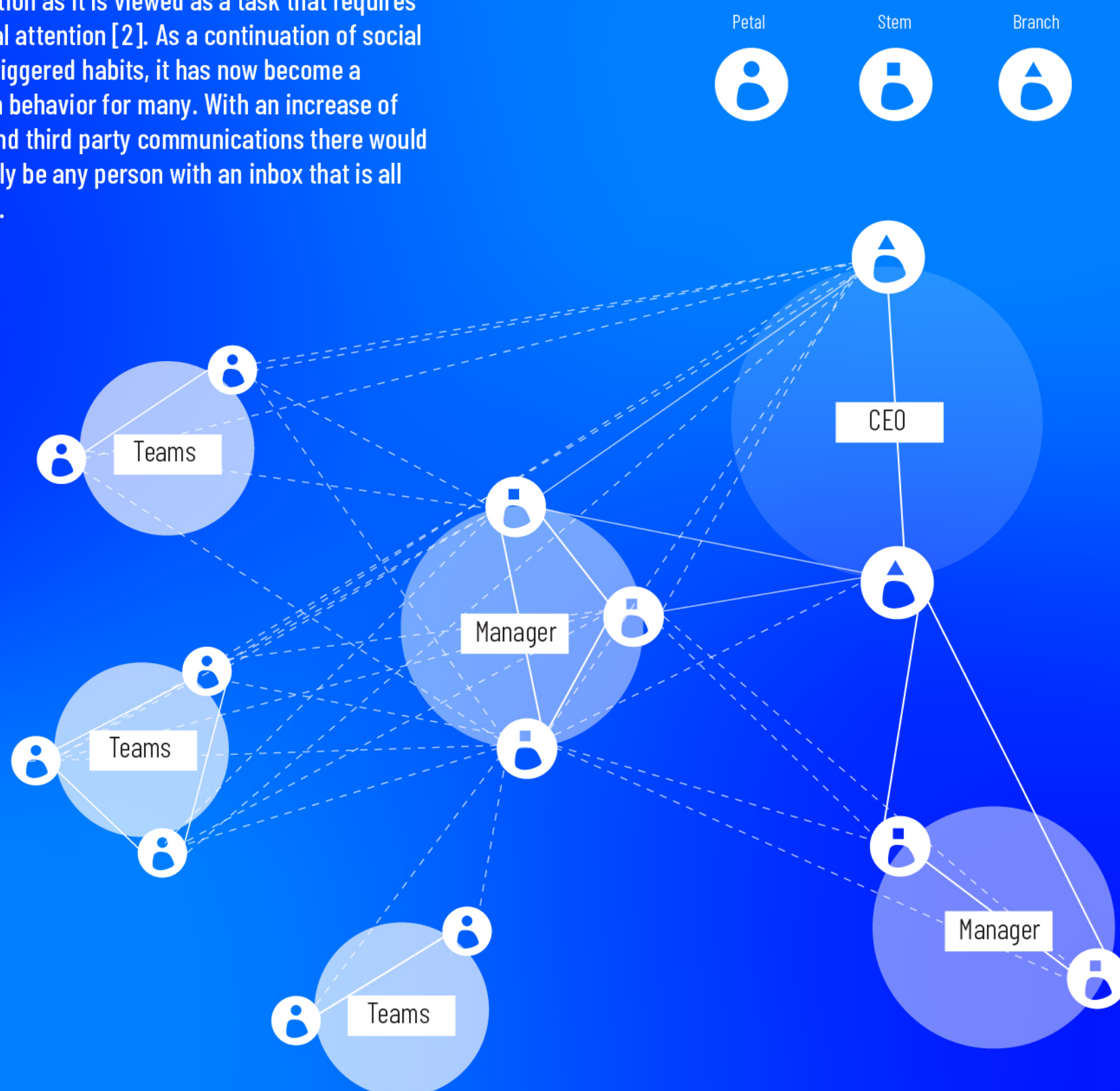
Focusing down on hierarchal needs, organizational emails can be made more user friendly with a triage system. By making communications easier, time spent on emails can be reduced, in turn reducing the usage of Internet and the energy utilized [3][5]

[2] Akbar et al., 2019
[3] McMurtry, 2014
[5] Panteli, 2002

2 RESEARCH & INSIGHTS

Based on the flow of communication, organizational communication can be classified into levels [6].
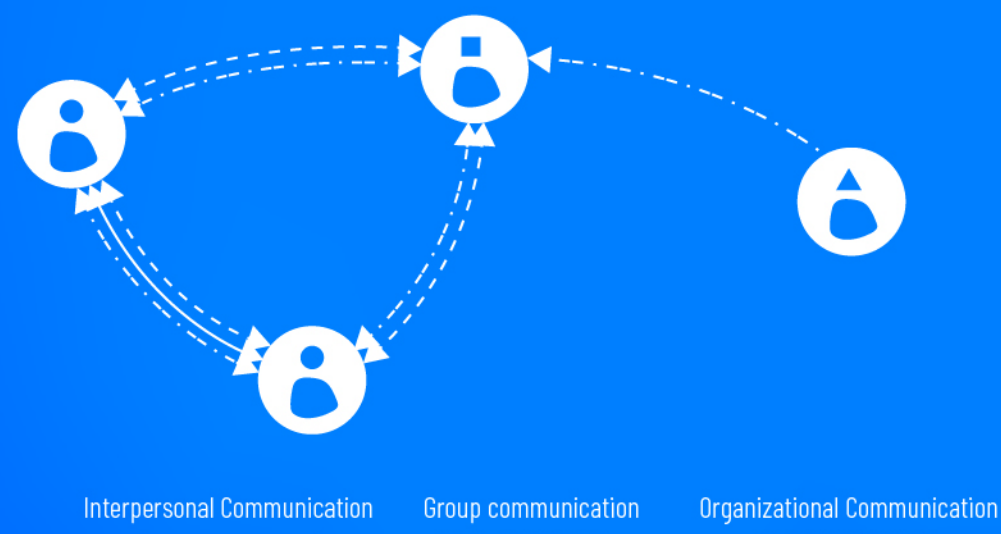
Interpersonal Communication

Group Communication

Organizational Communication

Inter-organizational Communication

Mass Communication

Interpersonal Communication   Group communication   Organizational Communication

Even professional relationships within the logical operational sequence have complexities that keep changing with time. If the triaging system were to overlook the presence of these complexities, it would only be beneficial in the short run while running the risk of being robotic in nature. An ANT visualization can help realize both human and non-human actors and the links between them [7]

However, as it is theoretical in nature, ANT may not be suitable to draw concrete conclusions but it can help drive research in areas required. Consideration of ANT however, introduces the concept of flexibility of personalization in the triaging system. Further research will need to be conducted in order to conclude the extent of personalization.
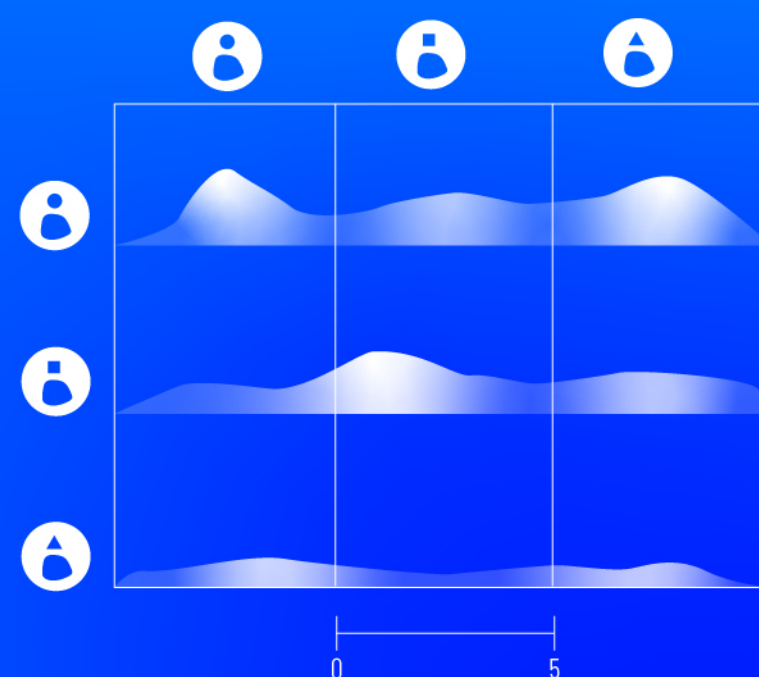
Illustrated possibilities of changes in relationships in years

Email triaging can be explained as sorting of unread emails, and users have been in practice with features such as manual grouping. There is however, no differentiation between the nature of the emails, which makes grouping time taking. It was found that within both groups of sequential sorters and priority sorters, users chose to sort out the less important emails first leaving behind the more important ones. Those were then acted upon based on circumstantial consideration. Most people in the same study also indicated that other salient information such as sender information, purpose for receiver, indicating that they should be considered into building interface for email [8]

Communication   Task   Meeting   Update
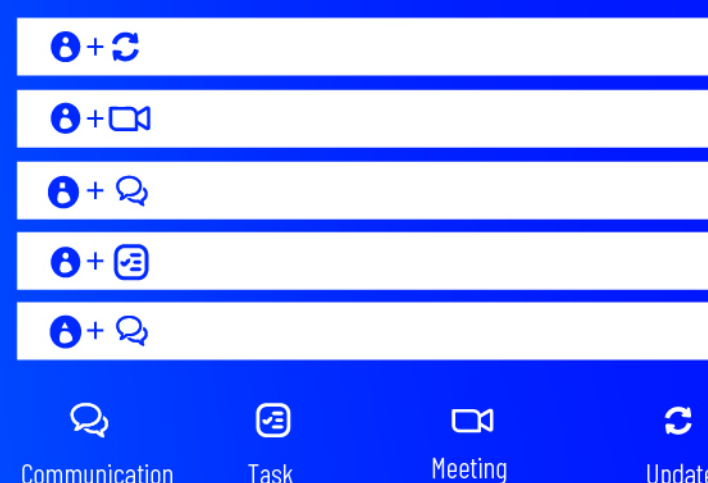
[6] Baker, ch 13, Organizational Communication 2020
[7] Sarlak, Salamzadeh and Farzad, 2020
[8] Neustaedter, Brush and Smith, 2005

8 SYSTEMS THINKING

The system around an employee in a organizational setup involves many actors, as both human and non-human nodes. The more complex the structure, more the nodes and the interconnections.
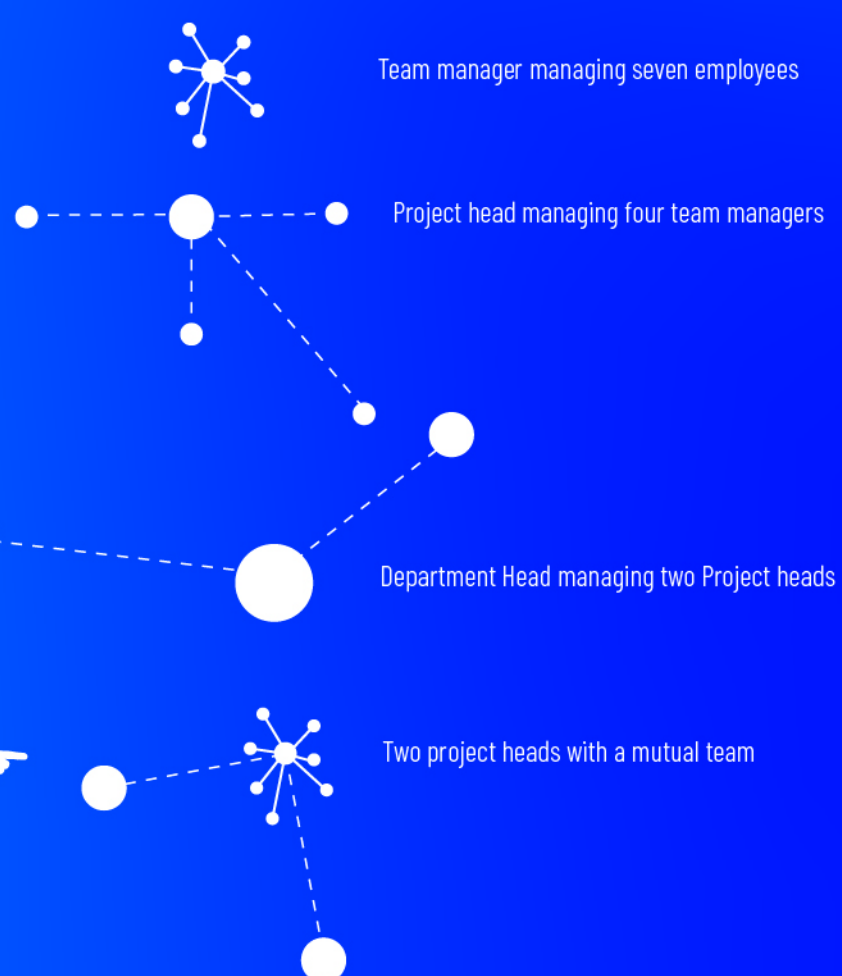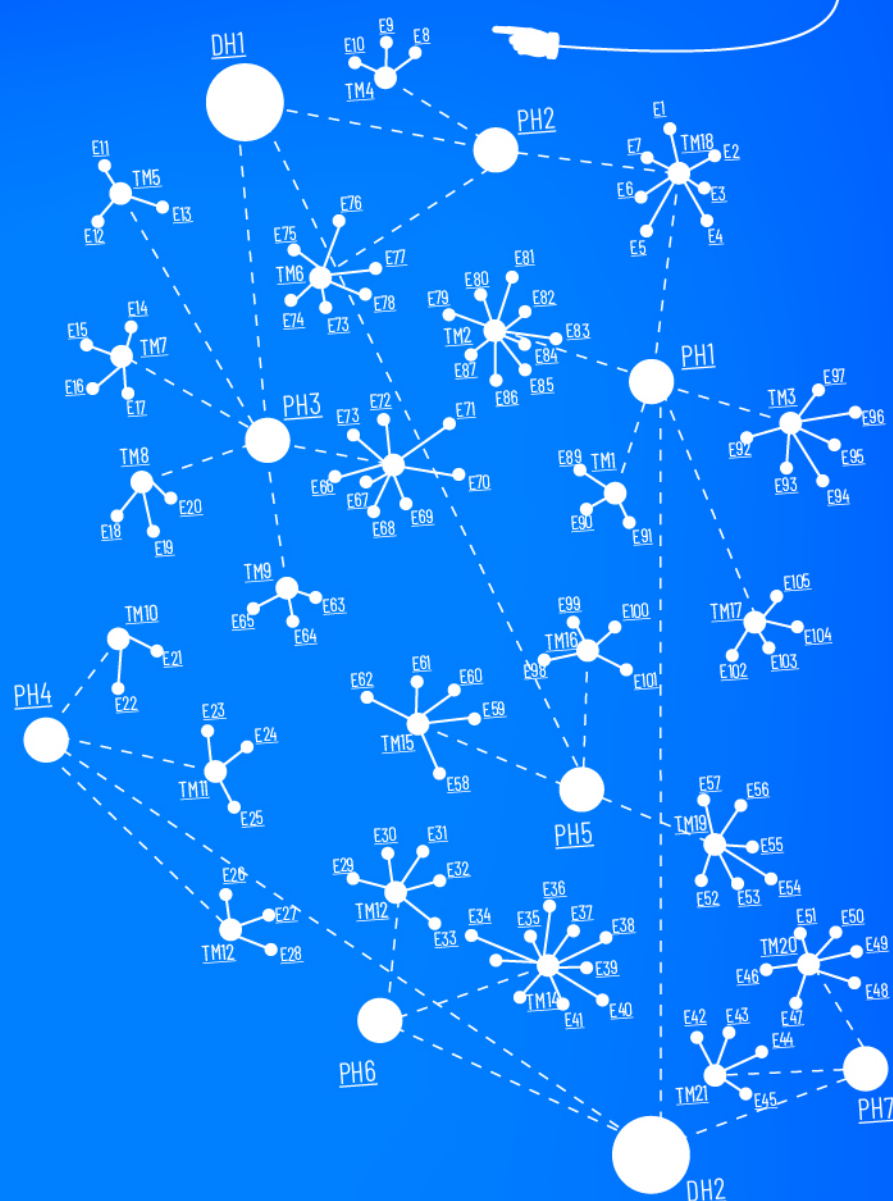
In order to respect these connections, each user will need to be offered agency of addition, but not subtraction into the triage system.

As soon as an employee is hired, they would automatically be enrolled into a tree system like in the below illustration, where the triage system will be automatically set based on their assigned team, team manager, project head, and the department head. They can then chose connections from the broader network that they would like to push ahead in priority.

Example: E9 will receive emails marked first priority from E8, E10 and TM4. Emails from PH2 will be second priority, and emails from DH1 will be third priority. E9 can however, add connections that are beyond this structure to any of the priority lists.

However, a second filter would be based on the contents of the email. Common themes being assignments, meetings, and communication. These can be easily differentiated using a defined Artificial Intelligence.

Team manager managing seven employees

Project head managing four team managers

Department Head managing two Project heads

Two project heads with a mutual team

Illustrated example of email priority in a large organization

4 INNOVATION &

VIABILITY

Surprisingly, very little interventions have been made around email. Early email interfaces with no differentiation whatsoever to a basic triage of main, other and spam, the upgrade within email systems seems redundant. However, there has been significant work around accuracy of classification within the basic system.

With the proposed triage system based on organizational hierarchy with ANT, the interface of email could be re-imagined to drive away from the panic of email overload. As a scalable system, modifications can be easily introduced and adaptations can be derived.

Contrary to the original goal of the concept, one possible shortcoming is the overlap and override of priorities, which if left to the user, can confuse the user more, leading to irritable behavior.

Furthermore, as the experience of email is not limited to receiving, but also sending and retrieval, a system

with improvisations in all three sections will prove more effective in reducing email stress.

Viability:
Diversion of Funds/ Investment : Investment into a system that would affect the wellbeing of it's employees is always in the benefit of the organization itself. Many organizations converted into hybrid working models of WFH and WFO (Work From Office) since 2020. The funds that were being used to improvise upon the physical workspace can be diverted into wellbeing of employees in hybrid workspaces.

Software Upgrade : Software companies like Google and Microsoft that provide email platforms can develop additional features onto their existing systems.

Socio-Technological Drive: Customization is usually a part of upgrade with any technology. With newer communication systems being invented, the ease of use evaluation of the current ones is bound to surface.
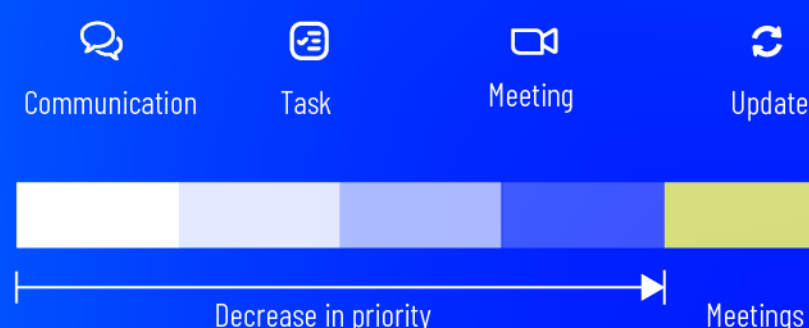
BIBLIOGRAPHY

[1] Kushlev, K. and Dunn, E.W. (2015) 'Checking email less frequently reduces stress', Computers in Human Behavior, 43, pp. 220–228. doi:10.1016/j.chb.2014.11.005.
[2] Akbar, F. et al. (2019) 'Email Makes You Sweat: Examining Email Interruptions and Stress Using Thermal Imaging', in Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems. CHI '19: CHI Conference on Human Factors in Computing Systems, Glasgow Scotland Uk: ACM, pp. 1–14. doi:10.1145/3290605.3300898.
[3] McMurtry, K. (2014) 'Managing Email Overload in the Workplace', Performance Improvement, 53(7), pp. 31–37. doi:10.1002/pfi.21424.
[4] Dolata, M., Jeners, N. and Prinz, W. (2013) 'Semi-automatic tagging for email'. doi:10.5167/UZH-91013.
[5] Panteli, N. (2002) 'Richness, power cues and email text', Information & Management, 40(2), pp. 75–86. doi:10.1016/S0378-7206(01)00136-7.
[6] Baker, K.A. (no date) 'Chapter 13. Organizational Communication', Organizational Communication, p. 15.

[7] Sarlak, M.A., Salamzadeh, Y. and Farzad, F.S. (2020) 'Actor-Network Theory and Networked Organizations, Proposing a Conceptual Framework', in Williams, I. (ed.) Contemporary Applications of Actor Network Theory. Singapore: Springer Singapore, pp. 197–210. doi:10.1007/978-981-15-7066-7_11.
[8] Neustaedter, C., Brush, A.J.B. and Smith, M.A. (2005) 'Beyond "from" and "received": exploring the dynamics of email triage', in CHI '05 Extended Abstracts on Human Factors in Computing Systems. CHI05: CHI 2005 Conference on Human Factors in Computing Systems, Portland OR USA: ACM, pp. 1977–1980. doi:10.1145/1056808.1057071.