KEY TAKEAWAYS

Fluid organizing on digital platforms

SODA - Soljuva organisoituminen digitaalisilla yhteistyöalustoilla

LIIKESIVISTYSRAHASTO

Project premises

SODA was a research project that explored **fluid organizations as constitutions built in and through communication**, and the possibilities of computational technologies in supporting communicative organizing.

A fluid organization dynamically transforms in response to changes in its operating environment. It crosses the boundaries of organizational hierarchies, groups, and formal processes by, for example, building flexible and fluid teams based on expertise needed for a given task.

SODA set out to ask: **Can we study and facilitate organizing by analysing communication data with computational methods?** Can we combine the insights gained from such data with novel technologies like AI to support fluid organizing? What kinds of expectations and ethical questions are involved?

How can digital communication data be used to study and support fluid organizing?

💡 Data from organizational communication platforms such as Slack and Teams can be used to **map patterns of action** in organizations: to map discussion topics, work routines, and tensions.

💡 Chat log data can also be used to **map knowledge and expertise** in organizations: topics that people and teams discuss are indicative of their expertise.

💡 Conducting reliable analyses often requires a **combination of older and newer methods and qualitative reading, not only generative AI tools**.

💡 The platforms, however, structure our communication and increasingly, our knowledge management. **Information extractable from chat data is dependent on what the platforms invite us to do.**

How to work with communication data?

1. **Extract:** Use natural language processing methods to extract meaningful details and facts from chat log data.

2. **Construct:** Apply network analysis, timelines, or clustering to construct an overview of the discussion and connections.

3. **Inform:** Use the overview to make sense of what gets constituted in communication, or feed the information to a communicative AI bot to improve its capability to operate in an organization.

Organizing and teamwork with communicative AI

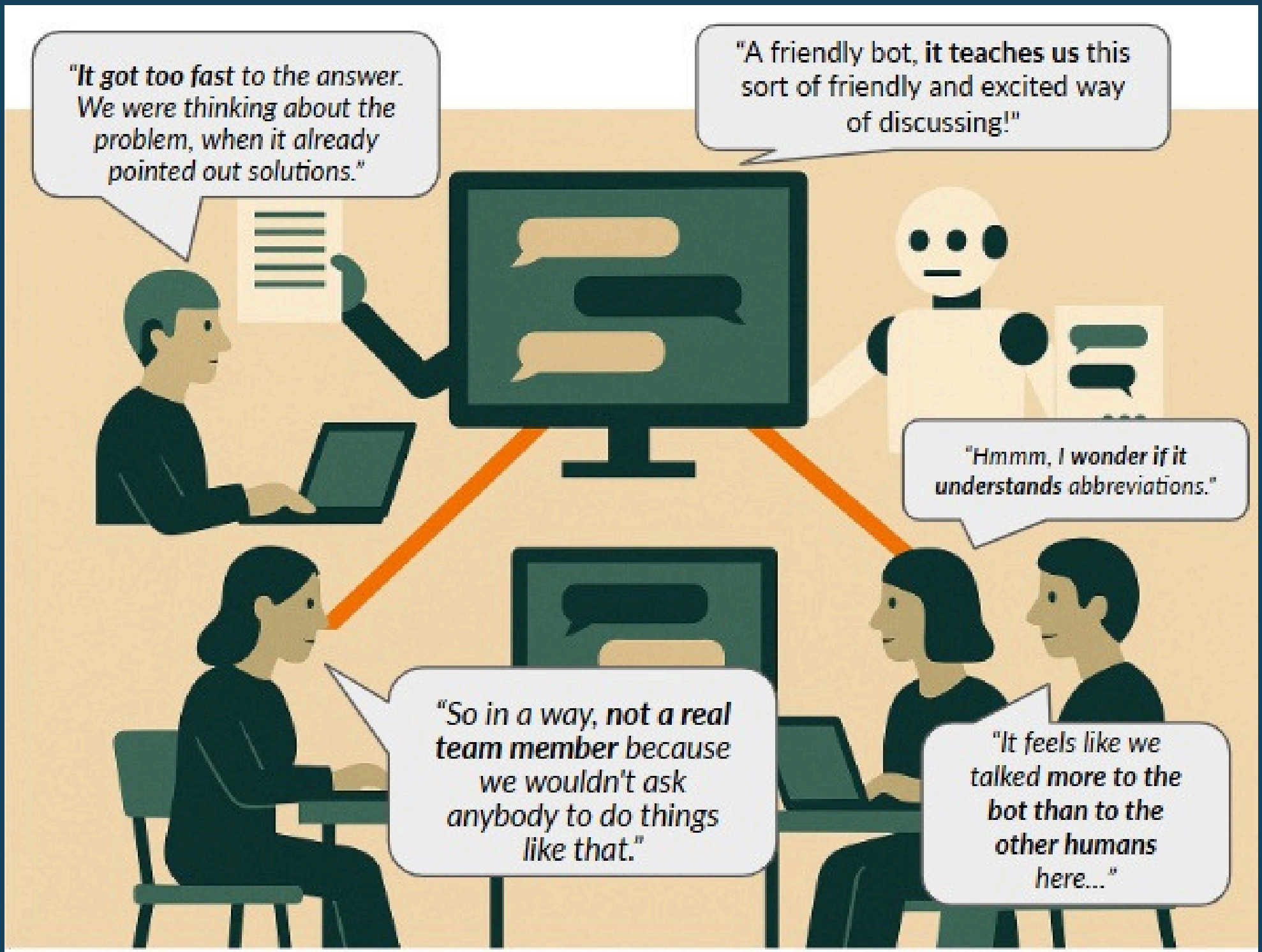
💡 Organizing on digital platforms is increasingly shaped by communicative AI (commAI); algorithm-based, intelligent technologies with semi-independent capabilities to use human language and likeness to adapt to conversation with humans.

💡 When these new kinds of “colleagues” can join in day-to-day communication, they can affect knowledge work, workplace relational dynamics, language practices, structures, and even teamwork.

💡 The (perceived) agency of a commAI in teamwork is shaped by three aspects:

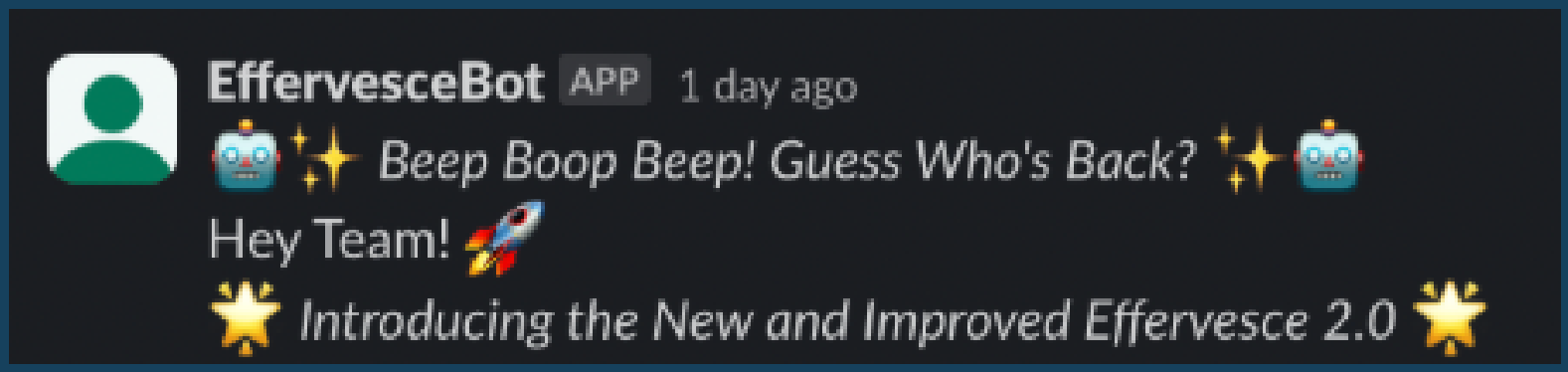
- **individual** expectations and competence relating to commAI
- **technological**, that is, observed, imagined, and speculated technical capabilities
- **social dimensions**, that is, collective sensemaking of commAI

CommAI in teamwork = Human perceptions, technological capabilities, and collective sensemaking



Picture inspired by an original work by Yutong Liu & Kingston School of Art https://betterimagesofai.org / https://creativecommons.org/licenses/by/4.0/

Meet Effervesce,
the bot raised by SODA

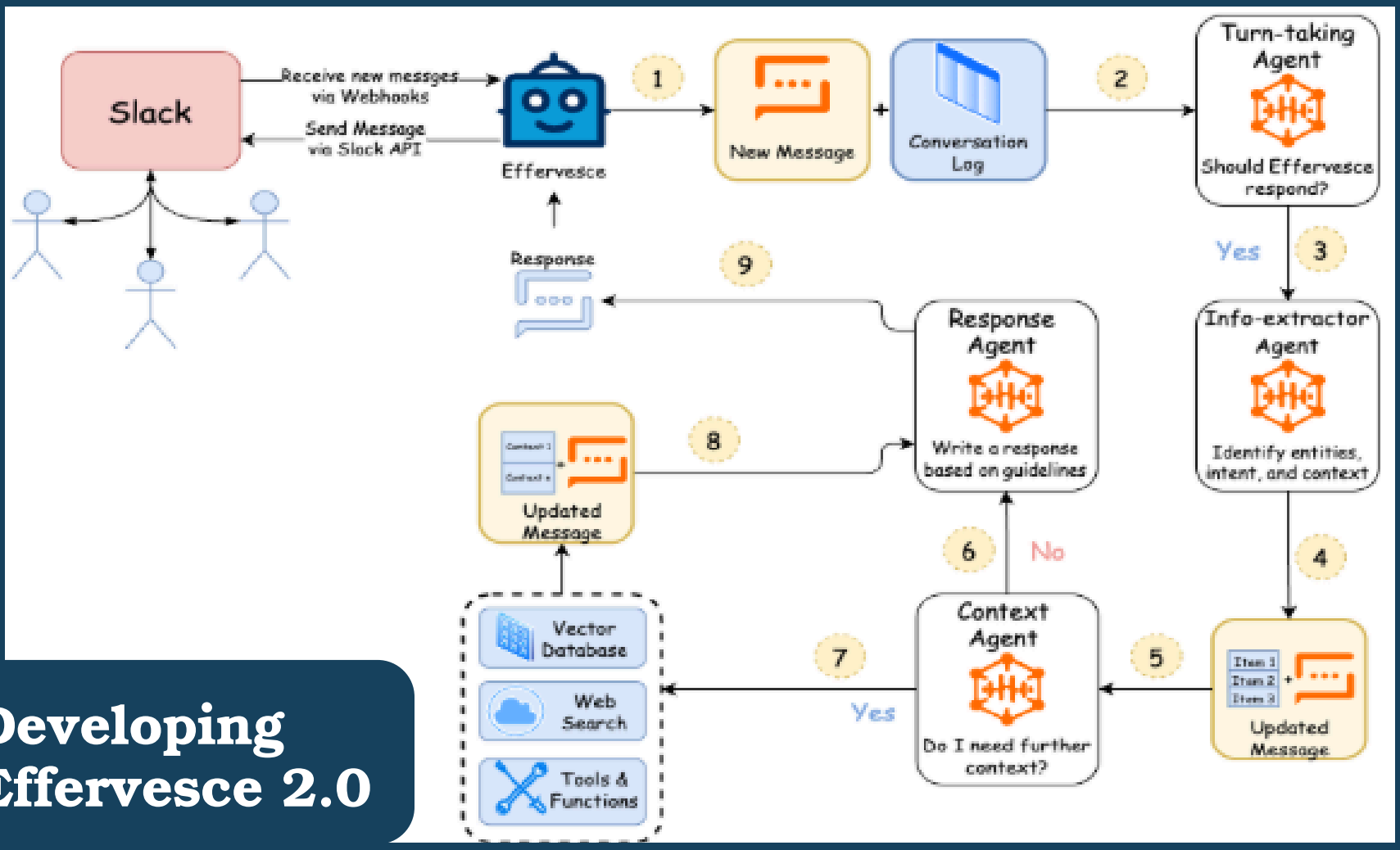


💡 Effervesce 1.0 is a **group conversation AI** designed to support team communication on Slack. It was built on top of an open-source large language model (Mistral 7B), fine-tuned using QLoRA on real-world Slack data.

💡 The system was trained and implemented to follow multi-user discussions, generate relevant responses, and handle common tasks such as answering questions or summarizing conversations.

💡 While simple in architecture, Effervesce 1.0 demonstrated that **LLMs can be adapted to follow group dialogue and contribute meaningfully**, laying the groundwork for more advanced features like tool use and multi-agent coordination.

Developing Effervesce 2.0



💡 Effervesce 2.0 builds on feedback from user evaluations to improve relevance, timing, and task support in group chats. It introduces function calling, retrieval-augmented generation (RAG), and better turn-taking to make the AI bot more responsive and useful in real-time collaboration.

💡 The model architecture supports integration with external tools like calendars and databases, enabling more interactive and context-aware responses.

Ethical implications of commAI at work

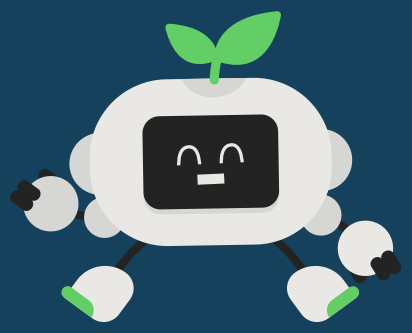
We interviewed 33 knowledge workers on how they see surveillance and privacy in the context of commAI.

💡 Informants considered several **types of data to be sensitive or risky** as training data for a commAI: business-sensitive data, personal data, unfinished products, and communication data.

💡 Three distinct approaches to privacy in group discussion with a communicative AI:

- **Detached**: privacy was someone else's responsibility or external to the informant
- **Administrative:** any privacy issue arising from work-related communication was an administrative problem in the context of work
- **Emotional:** privacy was a personal issue, relating to individual data boundaries.

💡 Privacy implications of team-based communicative AI in the workplace go beyond data protection and management to **protecting social boundaries and managing data flows**.

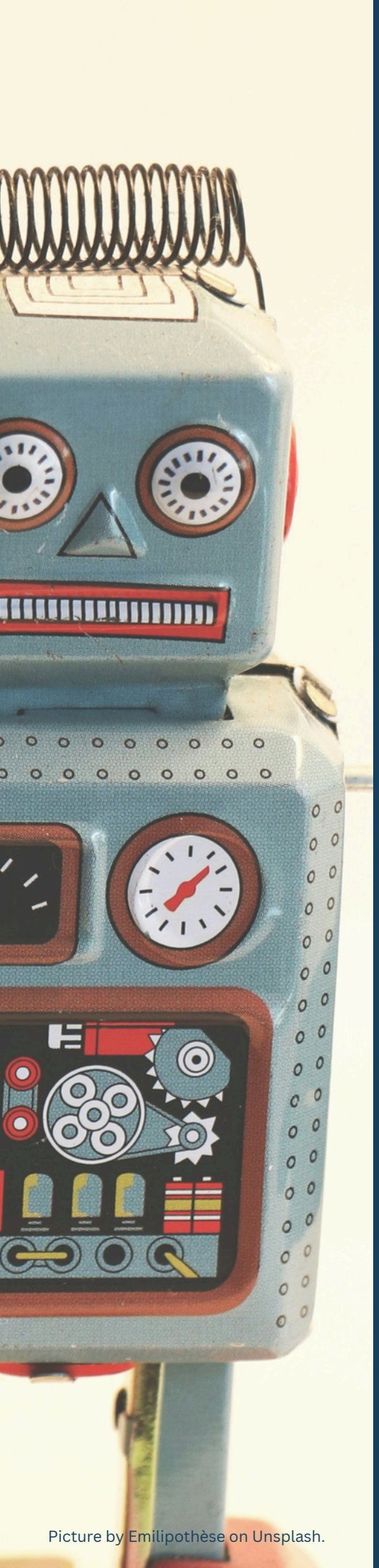


Ethical considerations for building a commAI

1. Build clear guidelines for communication on collaboration platforms - what kinds of things are acceptable to share?

2. Increase the visibility of data collection: State clearly when data is collected and how it is being used and processed.

3. Plan data collection well: who can have access to data and how is it supervised?



Picture by Emilipothèse on Unsplash.

The ABC of building an “AI” team member

Adapt and train the system to be aware of the organizational context: CommAI operating without access to internal information is essentially just a useless chatter bot.

Be aware of the complexity of human interaction: Dynamics of human interaction cannot be easily achieved by LLM approaches only. Systems benefit from guardrails and integrating classical ML techniques.

Commit to building transparent systems: Users need to understand how CommAI arrives at its recommendations and what data is has access to - and who is developing it, and why.

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Digital communication platforms increasingly mediate and store our work-related communication.

Such data can be used to map patterns of action, discussion topics, work routines, and knowledge in an organization.

Digital communication data can be used to train large language model based Communicative AI “colleagues”, which can take part in teamwork and help to process and retrieve organizational knowledge.

Successfull implementation of Communicative AI requires both, well-designed and adaptive AI agent(s), as well as consideration of human team members’ expectations, competencies, and conversational dynamics.

Digital communication data can contain private information and it might be considered sensitive by workers.

Using such data requires ethical considerations, transparency, guidelines, and other means to protect social boundaries.