

# Chat for Change: Chatbots as Catalysts for Conscious Customer Choices

## Motivation

- Ecological crisis drives the growing consumer awareness of the environmental and societal impact of their consumption habits.
- The adoption of new consumption models is based on conscious decisions made by customers.
- AI technologies such as chatbots may offer customers new ways for interacting with organizations and receiving environmental and ethical information.
- Chatbots could serve as a viable strategy to enhance consumer awareness, potentially promoting sustainable consumption patterns.
- Thus, it should be investigated how chatbots can help to catalyze conscious customer choices.



Source: AI-generated with Canva

## Research Question

**To what extent and in which ways can chatbots act as catalysts for conscious customer choices? How do chatbots impact users' attitudes and behaviors regarding pro-environmental behavior?**

## Contact



Katharina Breiter

## Approach / Literature

- First possible approach: Structured literature review according to [Webster & Watson \(2002\)](#) on chatbots and conscious customer choices.
- Second possible approach: Conduct a survey-based vignette experiment according to [Rossi \(1979\)](#) or [Rost \(2018\)](#).
- Literature: [Gimpel et al. \(2023\)](#), [Schützler et al. \(2020\)](#), [Diederich et al. \(2019\)](#) or [Prete \(2022\)](#).

# Communication and Collaboration in the New Normal

## Motivation

- The Covid-19-pandemic is having a far-reaching impact on the way we work together. In order to slow down the spread of the pandemic, numerous employees were asked by their employer to work from home. Even after the end of the Covid-19 pandemic, working from home will remain part of the „new normal“.
- For the majority of employees, increased working from home went hand in hand with more intensive use of digital technologies during working hours.
- With respect to the „new normal“ the question arises as to which working methods and use of digital technologies have proven to be productive and at the same time healthy for the employees during the pandemic.



Quelle: Gimpel et al. (2020): Digitale Arbeit während der COVID-19-Pandemie

## Research Question

- **How must communication and collaboration be designed in the New Normal in order to enable both productivity and people-friendly work?**

## Contact Person



Manfred Schoch



Julia Lanzl

## Vorgehen / Literatur

- Literature analysis on New Digital Work and insights into productive and humane work with digital technologies.
- Data collection and analysis to identify fields of action that are important for New Digital Work. Consideration of individual framework conditions and context factors.
- Basic Literature:
  - Brown, S. A., Dennis, A. R., & Venkatesh, V. (2010). Predicting collaboration technology use: Integrating technology adoption and collaboration research. *Journal of management information systems*, 27(2), 9-54.
  - Frank, L., Gimpel, H., Schmidt, M., & Schoch, M. (2017). Emergent User Roles of a Digital Workplace: A Network Analysis Based on Trace Data. *Proceedings of ICIS 2017*.

# Creativity in the New Digital Work Era

## Motivation

- The Covid-19 pandemic is exerting a profound influence on the way we collaborate. To mitigate the spread of the pandemic, many employees were instructed by their employers to work remotely. Even post the Covid-19 pandemic, remote work will continue to be a part of the New Digital Work era.
- For most employees, the increased prevalence of remote work coincided with a more extensive use of digital technologies during working hours.
- The advent of these technologies has not only transformed the way individuals interact with them on an individual basis but has also significantly altered the collaborative dynamics within teams.
- This transformation has yielded multifaceted implications for the creative pursuits of both individuals and teams.



Source: athree23 on pixabay

## Research Question

**How does the integration of digital technologies and remote collaboration in the New Digital Work era impact individual and collective creativity, and what strategies can be identified to foster and enhance creative processes?**

## Contact



Kathrin Endres

## Approach / Literature

- Literature analysis on Creativity in the New Digital Work era
- Data collection and analysis to identify strategies to foster and enhance creative processes in the New Digital Work era
- Basic Literature:
  - Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of management journal*, 39(5), 1154-1184.
  - Lanzl, J., Schoch, M., Jung, C., & Mayer, R. (2023). *New Digital Work: Die Zukunft der Arbeit im digitalen Zeitalter*.
  - Grabner, I., Klein, A., & Speckbacher, G. (2022). Managing the trade-off between autonomy and task interdependence in creative teams: The role of organizational-level cultural control. *Accounting, Organizations and Society*, 101, 101347.

# Digital Competencies

## Motivation

- Digital competencies consist a set of basic knowledge, skills, abilities, and other characteristics that enable people at work to efficiently and successfully accomplish their job tasks regarding digital technologies. They are important for career development and successful participation in the digital world (e.g. [Oberländer et al., 2020](#)).
- Leadership has changed drastically in the last few years, but which competencies make a leader successful in a digital context remains unclear (e.g. ), as well as how this way of leading impacts the leader (e.g. [Kaluza et al., 2020](#),
- With AI on the rise, understanding AI literacy and it's development will become crucial for future individual career and organization level success (e.g. [Ng et al., 2021](#))

## Research Question

**Which competencies are relevant for successful digital leadership?  
What are the most important digital competencies to consider for future career and organizational success (e.g. AI literacy)?**

## Approach / Literature

- Structured literature review (e.g., [Webster & Watson, 2002](#)) on digital leadership competencies or new digital competencies. Developing a framework (e.g., [Schwarz et al., 2007](#)), which summarizes and visualizes the results of the structured literature review.
- Semi-structured interviews or moderated focus group (e.g., [Myers & Newman, 2007](#)) with leaders on digital leadership competencies or with CIOs, CHROs, and other experts to explore new digital competencies (such as AI literacy, e.g. [Ng et al. 2021](#)).
- Literature:



Your own ideas on this topic  
are more than welcome!

Source: <https://www.management-circle.de/blog/robotic-process-automation/>

## Contact



Britta Ingwersen

# Digital Inclusion

## Motivation

- Digitalization is one of the megatrends of the 21st century.
- In terms of the sustainable development of society, all population groups, including elderly and mentally impaired individuals, should be included in digitalization.
- However, the needs of these population groups with regard to digitalization are only marginally taken into account in both research and practice.
- This is in part due to the fact that data collection from these individuals, in particular via interviews, is laborious and difficult due to cognitive impairments.
- Guidelines are needed for conducting interviews with cognitively impaired and elderly individuals in the context of information systems to allow for better data collection to be more inclusive of the needs of these groups.

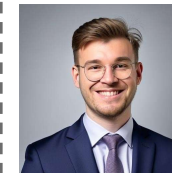


Source: <https://www.3playmedia.com/blog/how-new-technology-can-promote-digital-inclusion/>

## Research question

How should interviews with cognitively impaired and elderly individuals be conducted in the context of information systems?

## Contact



Philipp Dilger

## Method / Literature

- Search and identification of relevant literature: Conduct a structured literature review for interview guidelines with elderly and cognitively impaired individuals from other disciplines.
- Analyze which guidelines can be adopted for the context of information systems and which are additionally needed for this context.
- Initial literature: [Dewan and Riggins \(2005\)](#), Working paper: Dilger et al. (2023), [Hollomotz \(2018\)](#), [Wei et al. \(2011\)](#)

# Gamification in digital applications to support individuals' physical and mental health

## Motivation

- An unhealthy lifestyle, e.g., prolonged sitting, unhealthy diet or stress, are significant risk factors for the development of chronic physical and mental diseases and thus represent a considerable financial burden for the healthcare system
- Numerous digital applications already exist that are designed to motivate individuals to adopt a health-conscious lifestyle through gamification or game design elements (e.g., points, leaderboards, badges, rewards).
- However, there is limited evidence on the effectiveness and impact of gamification in the context of health-conscious behavior. Moreover, due to their extrinsic incentive strategy, gamified health applications are often used only for a short period of time.
- In addition, the potential downsides of gamified applications in the context of health are not yet adequately addressed in the literature.
- Because of this research gap, further scientific work is needed on how gamified health applications should be designed to improve the long-term health of their users.



## Research Question

**How does the integration of gamification into digital health applications affect the mental and physical well-being of users?**

## Contact



Carolin Jung

## Approach / Literature

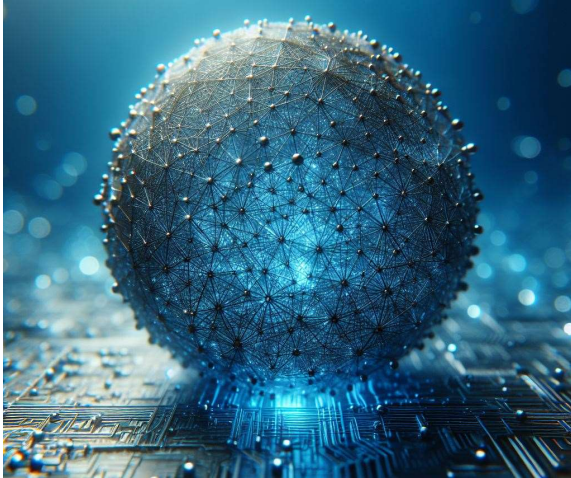
Sample introductory literature of existing gamification studies in the context of health and its potential negative effects:

- Johnson et al. (2016) „Gamification for health and wellbeing: A systematic review of the literature”
- Schmidt-Kraepelin et al. (2019) “Gamification in Health Behavior Change Support Systems - A Synthesis of Unintended Side Effects”
- Whelan, E. and Clohessy, T. (2021), "How the social dimension of fitness apps can enhance and undermine wellbeing: A dual model of passion perspective"

Design and implementation of gamification elements using an online experiment or survey, sample literature:

- Schmidt-Kraepelin et al. (2019) „Users' Game Design Element Preferences in Health Behavior Change Support Systems for Physical Activity: A Best-Worst-Scaling Approach”

# LLMs for Agentic Work Automation (AWA)



Source: Microsoft Copilot

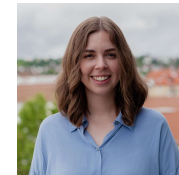
## Motivation

- In most companies, knowledge work is barely structured, implicit, labor-intensive and error-prone. The increasing shortage of skilled workers and the time-consuming training of new employees lead to low efficiency and high costs.
- Autonomous LLM-based agents have the potential to implement end-to-end automation of previously unstructured, complex and knowledge-intensive activities and counteract these challenges.
- The way in which this can be implemented has hardly been researched to date and requires flexible and practical methods, such as the Design Science Research approach, to capture and investigate the concept.
- In addition to the technical perspective, AWA has a variety of effects on individuals, companies and society that have not yet been investigated.

## Research Question Examples

- **What are the societal and ethical implications of LLM-based automation of knowledge work?**
- **What are the implications of LLM-based automation of knowledge work for companies and management?**
- **Which knowledge work processes in companies are suitable for LLM-based automation?**

## Contact



Kathrin Endres

## Approach / Literature

- Wang et al. 2023, A Survey on Large Language Model based Autonomous Agents
- Yining Ye et al. (2023). Proagent: From robotic process automation to agentic process automation
- Sonnenberg, C. & vom Brocke, J. (2012). Evaluations in the science of the artificial - Reconsidering the build-evaluate pattern in design science research. In K. Peffers, M. Rothenberger, & B. Kuechler (Eds.), Lecture Notes in Computer Science, Design Science Research in Information Systems: Advances in Theory and Practice (pp. 381-397). Springer. [https://doi.org/10.1007/978-3-642-29863-9\\_28](https://doi.org/10.1007/978-3-642-29863-9_28)

# Not “humans in the loop” but “computers in the group”

## Motivation

- “The saying in AI now is “humans in the loop” – make sure not to leave the humans behind. But that may be the wrong way of looking at it. We’re going to lead. They’re here to make our lives better. That’s why I say not “humans in the loop” but “computers in the group.” We’re bringing them in.” - Thomas Malone
- Exponential growth in the number of groups working virtually. Facilitated by their powerful capabilities, **Group Support Systems (GSS)** may assist virtual groups to improve their performance.
- How to design, build and integrate a GSS to support virtual group work improving their performance (e. g. through a Hybrid or Artificial Intelligence)?



Source: <https://issat.dcaf.ch/Share/Blogs/ISSAT-Blog/New-technologies-to-service-SSR-The-power-of-Collective-Intelligence>

## Objective

Elaborate the design of a GSS for supporting virtual groups to improve their performance (e. g. GSS as a smart chatbot providing advice).



#GSS@fim  
#GSS@NeWork

## Contact



Stefanie Lahmer

## Method/ Literature

- Depends on the topic: Design Science Research, Interviews, Experiment
- Introductory Literature:
  - Collective Intelligence: [Woolley et. al \(2010\)](#)
  - Group Support Systems in Collective Intelligence: [J.B. Barlow, A.R. Dennis \(2016\)](#)
  - Artificial Intelligence in groups: [Winkler et. Al \(2019\)](#)



# Pathways towards Twin Transformation Maturity

## Motivation

- Management agendas are currently determined by two trends: digital transformation (DT) and sustainability transformation (ST). Both trends have opened up numerous opportunities for business models.
- The convergence of both trends, namely twin transformation (TT), is becoming increasingly important in practice.
- An investigation of the phenomenon is crucial, as managers are increasingly confronted with the digital world and, at the same time, ambitious climate protection targets.
- Yet, the pathways toward twin transformation maturity have merely been explored...



Source: <https://events.euractiv.com/event/info/the-twin-transition-how-can-green-growth-and-digital-transformation-go-hand-in-hand-to-drive-europes-recovery>

## Research question

- How can the pathways towards Twin Transformation maturity be described?
- Which capabilities are needed for taking the different pathways, i.e., being an expert in digital or sustainability transformation or being a newcomer to transformation?

## Contact



Katharina Breiter



Feline Schnaak

## Method/ Literature

### Method:

- Structured literature review according to Webster & Watson (2002) to identify DT- and ST- specific capabilities towards twin transformation
- Developing a framework (e.g., reference model, taxonomy) according to [Schwarz et al. \(2007\)](#) or [Nickerson et al. \(2013\)](#), which summarizes and visualizes the results of the structured literature review
- Description of the pathways and their specificities (and possible validation via semi-structure interviews)

Literature: [Graf-Drasch et al. \(2023\)](#), [Brenner and Hartl \(2021\)](#), [Del Rio Castro et al \(2021\)](#), [Zimmer and Järveläinen \(2022\)](#)

# Reverse Mentoring: How to Teach Digital Skills

## Motivation

- Reverse mentoring is a mentoring method in which younger/less experienced employees mentor older/more experienced colleagues. Typically, it is used in the context of digital transformation, social media, or technological developments. This method enables knowledge sharing between generations and can contribute to better collaboration, innovation and a culture of lifelong learning in organizations, especially in the digital age.
- Digital skills are necessary to use digital technologies (e.g., basic computer skills, communication, information seeking, privacy and media literacy). They are important for career development and successful participation in the digital world.



Source: [Gerd Altmann](#) on [Pixabay](#)

## Research Question

What approaches to reverse mentoring exist and can they be used to teach digital skills?

## Contact



Daniela  
Grünert



Frederik  
Schöttl

## Approach / Literature

- Structured literature review (e.g., [Webster & Watson, 2002](#)) on reverse mentoring approaches and digital skills. Developing a framework (e.g., [Schwarz et al., 2007](#)), which summarizes and visualizes the results of the structured literature review.
- Semi-structured interviews or moderated focus group (e.g., [Myers & Newman, 2007](#)) with reverse mentoring couples.
- Survey to measure digital skills that can be impacted by reverse mentoring. Consideration of individual framework conditions and context factors.
- Introductory Literature:
  - Literature Digital Skills: [van Laar et al., 2019](#), [Merchel et al., 2021](#)
  - Literature Reverse Mentoring: [Hammarén et al. 2022](#), [Bertram et al. 2023](#)

# Shaping the Togetherness of Tomorrow: Crowdsourcing Platforms in Sustainable Smart Cities

## Motivation

- By 2050, it is estimated that 70% of the world's population will live in cities, which poses new challenges in terms of living together (e.g., increasing energy demand, decreasing housing space, difficulties in reaching the citizens)
- How we can live together sustainably in a limited space will be largely determined by the use of new digital technologies
- The use of these technologies enables the emergence of so-called sustainable smart cities (SSC), which are often top-down organized and lack involvement of the individual citizens
- Platforms, specifically crowdsourcing platforms, have the great potential to let citizen participate in the SSC's activities or decisions (e.g., collecting ideas on how and where to build green spaces)
- Yet, most SSC do not leverage neither the collective intelligence of their citizens nor the opportunities emerging from crowdsourcing platforms



## Potential Research Questions

- **Status quo:** Which crowdsourcing platform approaches in SSC to better reach citizens do exist?
- **Pave the way:** What functionalities should a crowdsourcing platform in SSCs provide?
- **Breaking the ice:** What are the (perceived) barriers to the use of crowdsourcing platforms in SSC?

## Contact



Oliver Meindl



Scan & contact me

## Exemplary Methods

- Structured literature research e.g., on existing crowdsourcing platforms in cities
- Interviews e.g., with experts or future residents of a smart city
- Surveys e.g., from the point of view of the citizens regarding desired functionalities of a crowdsourcing platform
- Moderated focus group e.g., with smart city experts

## Literature

- City 5.0: [Rosemann et al. \(2020\)](#)
- Smart City & UN SDGs: [Kutty et al. \(2020\)](#)
- Smart & Sustainable Cities: [Ahvenniemi et al. \(2016\)](#)
- Participation in Cities: [Simonofski et al. \(2017\)](#)
- Crowdsourcing: [Estellés-Arolas et al. \(2012\)](#)
- Crowdsourcing & Cities: [Shahrour and Xie \(2021\)](#)

# There is AI in SustAInability

## Motivation

- The world is facing a series of huge sustainability-related problems, which together are called grand challenges
- In 2015 the United Nations published its 17 Sustainable Development Goals, an urgent, important, and strategic call for solutions to these grand challenges.
- Artificial intelligence (AI) is an all-changing technology, which is more ubiquitous than ever in public discourse due to a giant leap forward in generative AI technology
- With a steadily increasing use, questions on ethical and virtuous use of AI arise
- If put in use sustainably, AI may open up great opportunities for taking sustainable development to the next level
- Even though first research endeavors on sustainability of AI and AI for Good/Sustainability exist, efforts to structure the existing knowledge to motivate future research endeavors are missing and already defined as a research gap

## Research Questions

- What are the different dimensions of sustainable AI?
- How can sustainable AI be conceptualized with a taxonomy?

## Proposed Method

Development of a classification system (i.e., a taxonomy) for sustainable AI following [Nickerson et al. \(2013\)](#):

1. Structured literature search with a search query
2. Initial development of a taxonomy
3. Multiple feedback loops with supervisors
4. (Optional: Iterative refinement of the taxonomy through interviews with experts)

#helptomaketheworldabetterplace



Source : <https://www.majorel.com/future-customer/science-and-research/artificial-intelligence-and-sustainability/>

## Contact



Feline Schnaak



Oliver Meindl

## Exemplary Method

- [Nishant et al. \(2020\)](#)
- [Kar et al. \(2022\)](#)
- [Schoormann et al. \(2023\)](#)
- [Goralski and Tan \(2020\)](#)
- [Vinuesa et al. \(2020\)](#)

# Trust in Proactive Services

## Motivation

- Increasing advancements in digital technologies, especially in artificial intelligence, are changing the nature of services.
- Emerging *Proactive Services* no longer rely on the consumers making the first move, but instead, service providers can anticipate consumers' needs and address them proactively.
- Within this new service type, consumers may enable the service provider to decide upon the consideration, decision, and enactment of the service.
- In proactive services, consumers assign these previously “owned” phases to the service provider and thereby, also devolve power to the provider.
- Thus, trust is an indisputable prerequisite for consumer acceptance.
- However, it is unclear how individual characteristics of proactive services impact consumers' trust.



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## Research question

How do individual characteristics of proactive services influence consumers' trust?

## Contact



Philipp Dilger

## Method / Literature

- Search and identification of relevant literature
- Development of a survey to measure trust in various characteristics of proactive services
- Initial literature: [Leyer et al. \(2017\)](#), [Rau et al. \(2020\)](#), [Wenninger et al. \(2022\)](#), [Dilger and Markgraf \(2022\)](#)