

# HUMAN CENTERED AI

Having human-centered needs and values at the center of design systems.

Human-Centered AI (HCAI)'s approach places human needs, values, and well-being at the center of system design and deployment. It's not just about functionality—it's about *ensuring AI systems are understandable, ethical, empowering, and aligned with how people and organizations actually work.*

## PRINCIPLES & PRACTICES

By aligning AI with human-centered design and organizational goals, HCAI strengthens not only system usability but also long-term trust and adoption.

**It's a shift from “Can we build this?” to “Should we build this—and how will it serve people?”**

Winby, S. & Xu, Wei, *Human-Centered AI Maturity Model: An Organizational Design Perspective*, December 2025

Table 2:

# HCAI Design Guiding Principles



	Design Principle	Definition and HCAI Goals
1	Transparency and Explainability	Provide explainable and understandable AI output for users to enhance user trust and empower informed decisions.
2	User Control and Empowerment	Allow users to understand, influence, and control AI behavior when necessary; Ensure AI aligns with user needs.
3	Ethical Alignment	Develop AI in alignment with ethical/societal norms to preserve human values, privacy, foster trust, and minimize harm.
4	User Experience	Create interactions that are engaging, intuitive, accessible, and aligned with user expectations.

TABLE 2: Slide 1/2

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# HCAI Design Guiding Principles



	Design Principle	Definition and HCAI Goals
5	Human Augmentation & Collaboration with AI	Design AI to enhance human abilities and human-led collaboration to enhance productivity and effectiveness.
6	Safety and Robustness	Prioritize user safety and maintain reliability in diverse scenarios to ensure resilience and reduce potential risks to users.
7	Accountability	Ensure responsible AI mechanisms for accountability to hold humans (e.g., operators) accountable for AI actions.
8	Sustainability	Develop AI to support environmental, social, and economic well-being to prioritize human well-being and cultivate resilient ecosystems while aligning with sustainability.

TABLE 2: Slide 2/2

Table 1:

# HCAI Practices and Organizational Impact



TABLE 1 HCAI Practices and Organizational Impact (Part 1)		
Key HCAI Practices	Description	Impact
<b>User Research and Engagement</b>	Involve end-users early in the development process through interviews, surveys, usability testing, and deliberation design shops. Equip users with the knowledge and tools to understand and interact with AI systems	Ensures that AI systems are relevant and meet user needs, leading to higher adoption rates and satisfaction. User interaction with AI in deliberation design impact new work and organization designs.
<b>Iterative Design</b>	Utilize rapid prototyping and iterative feedback loops to refine AI solutions continuously.	Enhances product quality and reduces the risk of failures by incorporating user feedback early and often.
<b>Ethical AI Frameworks:</b>	Adopt ethical guidelines that prioritize fairness, transparency, and accountability in AI systems. This involves conducting ethical assessments and considering societal implications of deploying AI systems.	Builds trust with users and stakeholders, minimizing reputational risks and aligning with regulatory requirements
<b>Explainability and Transparency:</b>	Develop AI systems that can explain their decisions in understandable terms. Explain what decisions are made, what data is used, and how outcomes are achieved.	Increases user trust and reduces resistance to AI adoption, especially in sectors like healthcare and finance where decisions have significant consequences.

Table 1:

# HCAI Practices and Organizational Impact

TABLE 1 HCAI Practices and Organizational Impact (Part 2)		
Key HCAI Practices	Description	Impact
<b>Safety and Reliability</b>	Ensure AI systems are safe and reliable, minimizing the risk of unintended consequences or failures. This includes testing, validation, and ongoing monitoring.	AI systems that are safe and reliable
<b>Cross-Disciplinary Collaboration:</b>	Involve stakeholders / experts from various fields (e.g., ethicists, sociologists, designers) alongside technologists to ensure a well-rounded perspective and solutions	Results in more robust solutions that take into account diverse perspectives, potentially leading to innovative applications and reduced biases.
<b>Focus on Empowerment:</b>	Design AI systems that augment human capability rather than replace it. AI systems that empower users and enhance their abilities rather than replacing them. This typically entails empowering through information, skills, and decision making.	Promotes user empowerment and job satisfaction, while also enhancing productivity and creativity within team -based work systems. Typically changes work design and org structure.
<b>Continuous Learning and Adaptation</b>	Implement mechanisms for AI systems to learn from user interactions and adapt over time. Implement mechanisms for ongoing evaluation and feedback, allowing for iterative improvements.	Creates dynamic work systems that remains relevant and effective, leading to sustained user engagement and improved outcomes