

ALCHIMIA and Human-Centered Design



WHAT'S HUMAN CENTERED DESIGN ?

Human-Centered Design (HCD) is an approach that prioritizes understanding the needs and wants of users throughout the development process, leading to technologies and systems that truly serve them.



By understanding users throughout the design process, HCD aims to develop systems that are:

- More user-friendly and acceptable
- Used more efficiently and effectively
- Have fewer negative impacts



HCD follows established best practices outlined in the international standard ISO 9241-210:2019. This standard defines 6 key principles that ensure a user-centered design approach:

- The design team includes multi-disciplinary skills and perspectives
- The design is based upon an explicit understanding of users, tasks, and environments
- The process is iterative
- The design is driven and refined by user-centered evaluation
- The design addresses the whole user experience
- Users are involved throughout design and development

How is HCD applied in the ALCHIMIA project?

User and stakeholder requirements were gathered through activities like:



Interviews: In-depth conversations with managers and steelworkers to understand their needs and concerns



Surveys: Questionnaires distributed to a broader group to gather wider perspectives



Key findings after reflexive analysis and evaluation



- In general, interview and survey respondents indicated strong support for the aims and objectives of the ALCHIMIA project
- The evaluation indicated that the ALCHIMIA project is well aligned with the HCD principles

How Can We Guarantee ALCHIMIA's Continued Alignment with HCD Principles?



more structured, frequent and intense communication and collaboration between users, stakeholders and developers to prevent misunderstandings affecting the technological design



more general information for workers within plants, ensuring that workers (users) have clear and honest explanations as to why a new technology is needed and the likely consequences for the company and their jobs



more interdisciplinary working between the social science and technical partners to ensure a newly developed technology can work as intended and align with HCD principles

