rawshaping©
technology

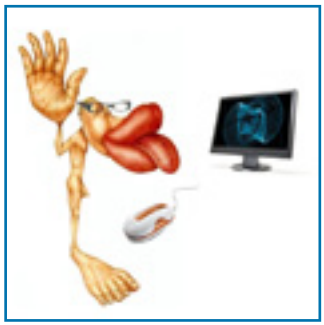
UNIVERSITY OF TWENTE.

Research & Development

Research, development and realization of hybrid design tools for design and engineering processing.

Hybrid design tools for individual and collaborative interaction based on creativity, applied innovation and mixed reality.

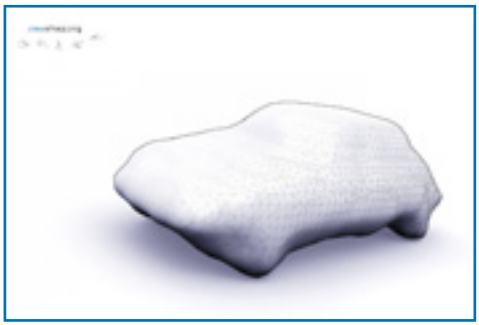
Distributed cognition [intuitive- and abstractive]and tacit knowledge combined with user-interaction to bring back the tacit and tangible elements of design and engineering processing into CAD systems.

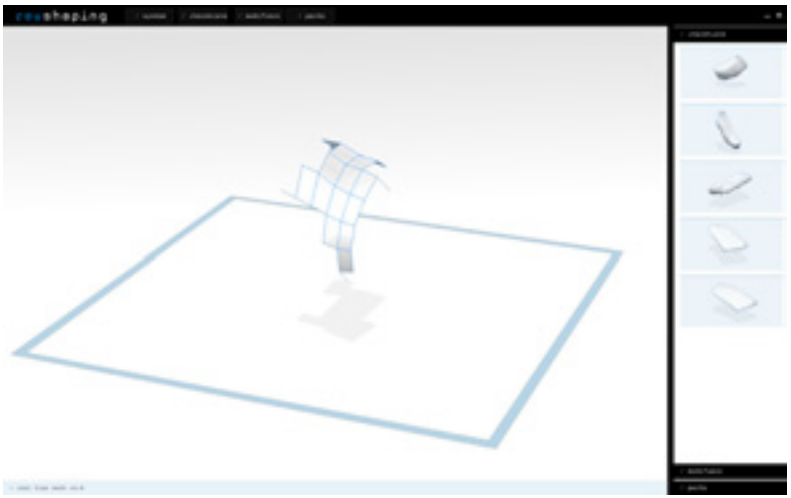


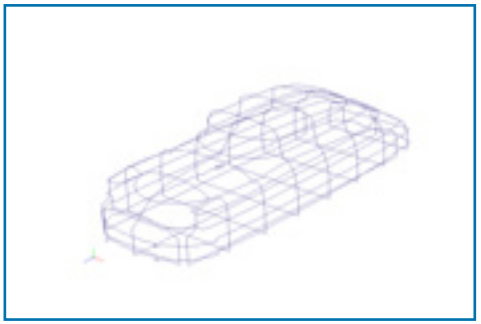
Experimentation Haptic and vision-based representation configurations for testing and experimental purposes. The aim of the experimentations is to measure, explore and quantify the effectiveness of untethered and tethered tool use, apparent routines, mediation of restraints, signs of flow and stall, manual dexterity as well as gestural and skill development.

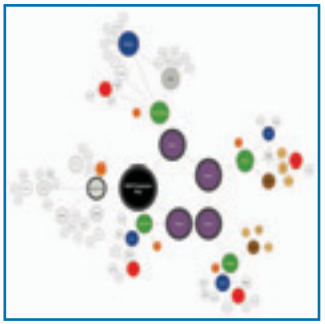
Ideation transformation of ideas, abstract or fuzzy notions, to express language spoken or non-spoken into raw and/or aesthetic models.

Exploration through variety, ambiguity and spontaneity we foster non-linear, non-regular thinking and doing. Thereby evoking insight, enhance understanding and create enjoyment during interaction, decision-making and problem-solving.

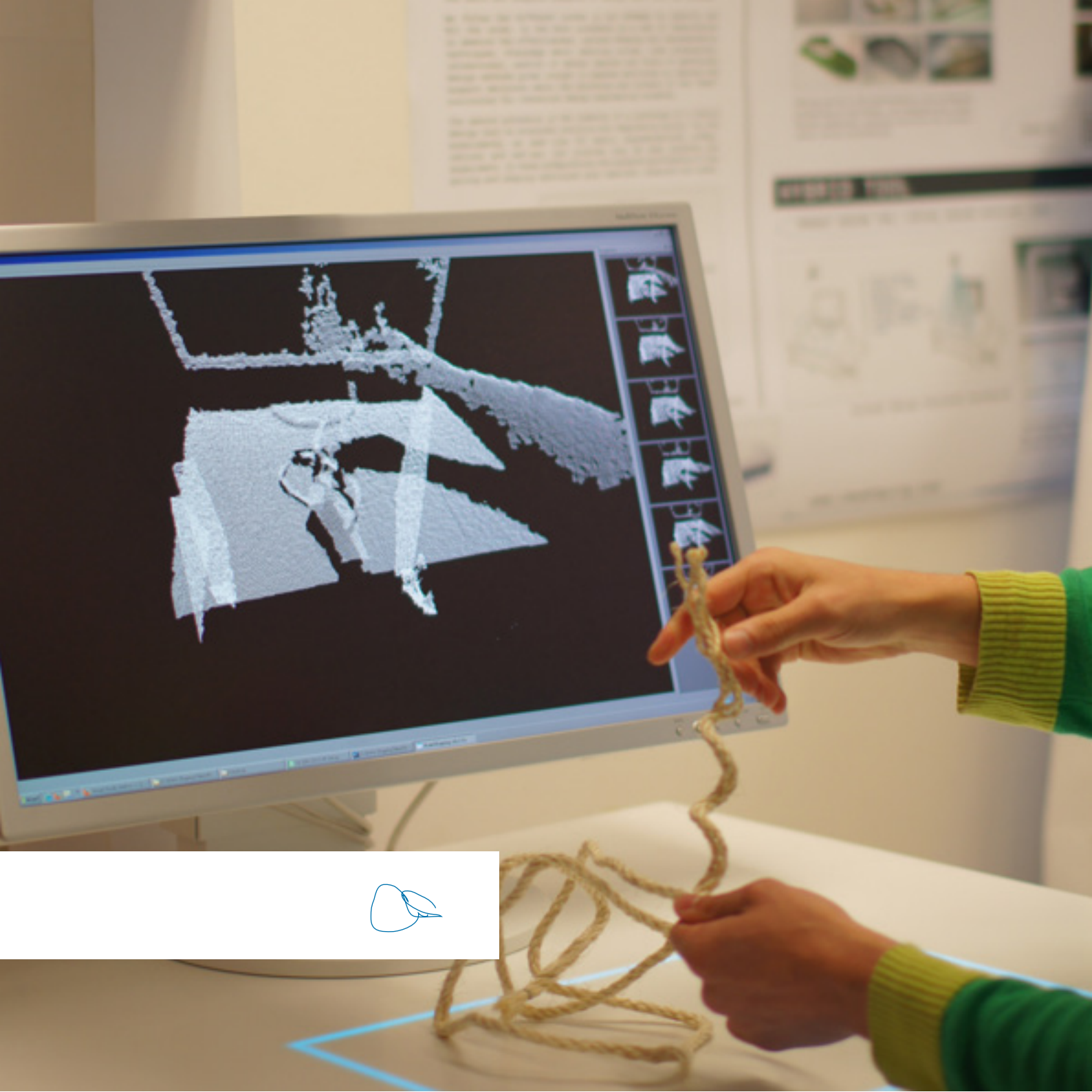




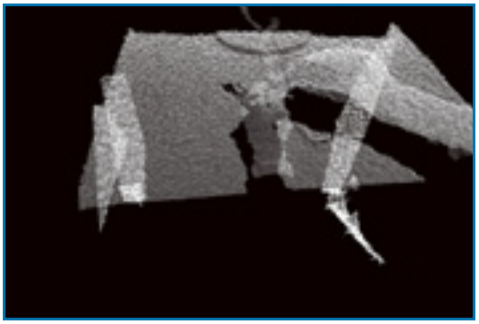


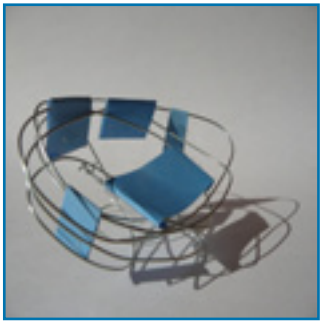
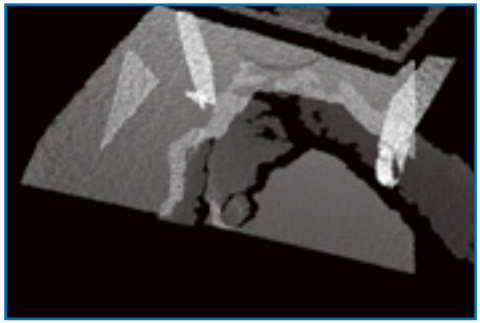


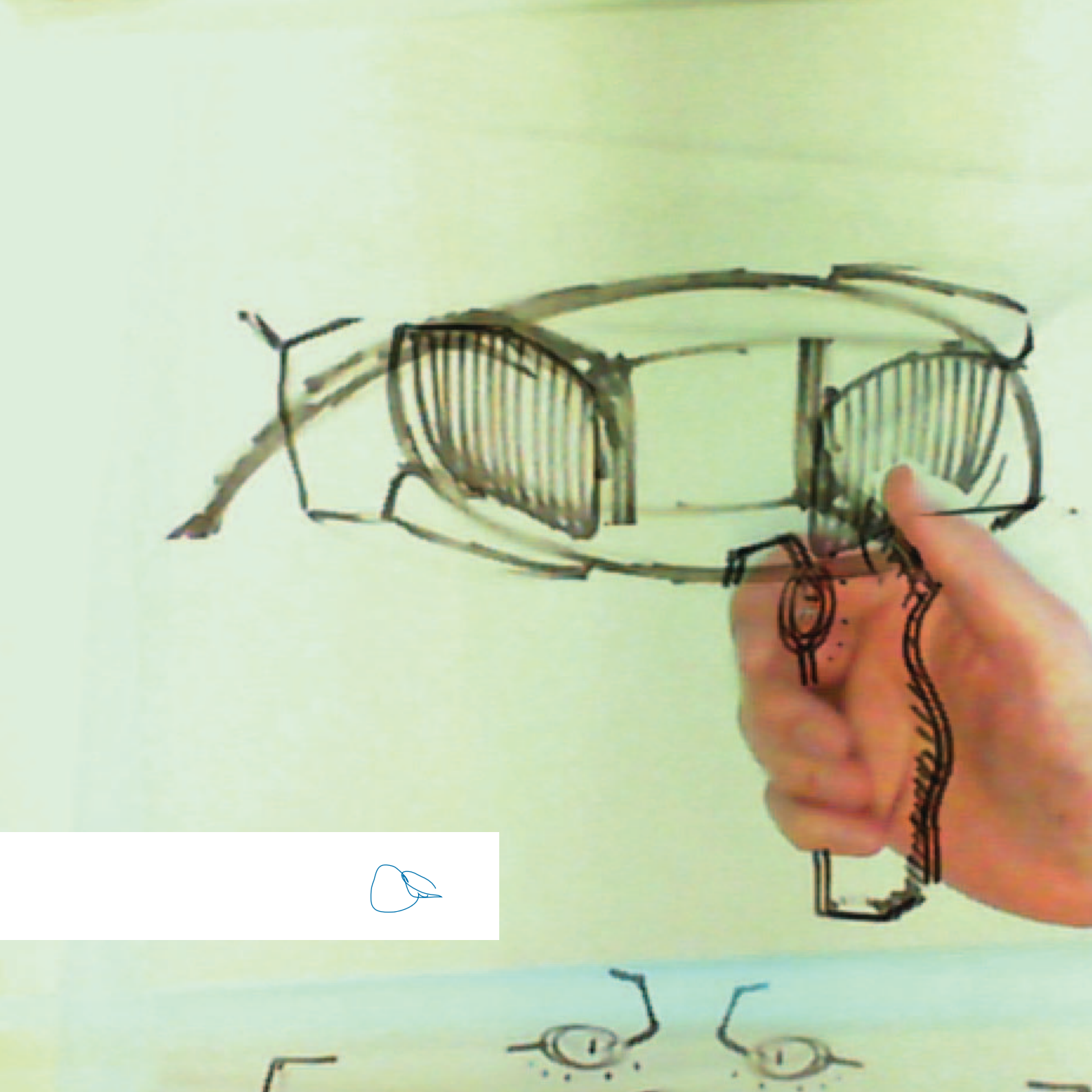
Manipulation of tangible physical objects, tools and materials in a synthetic environment. Bimanual interaction in sensorial space supported by virtual design tools. The hybrid design tool stores the captured iterations as polygon meshes (listing) by mimicking the tangible representations, and storing them in a database as time-stamped snapshots. By creating such a timeline of the evolving tangible object manipulations captured by means of a vision system, the hybrid tool allows the fusion of different polygon meshes with subsequent optimization (synthesis).



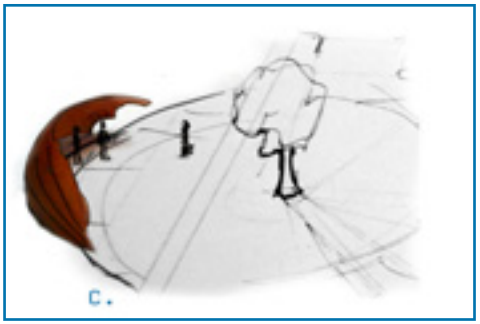
Vizualization represent real interaction with virtual prototyping. Real-time visualization of virtual instances on screen allow exploration, track-back, instant feedback and synthesizing data. The layer-transparency, instant immediacy and active [speedy] interaction in the physical and digital domain supports the interaction, flow, task, decision and process.

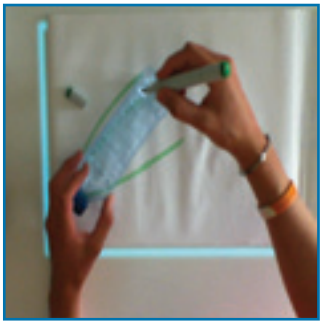




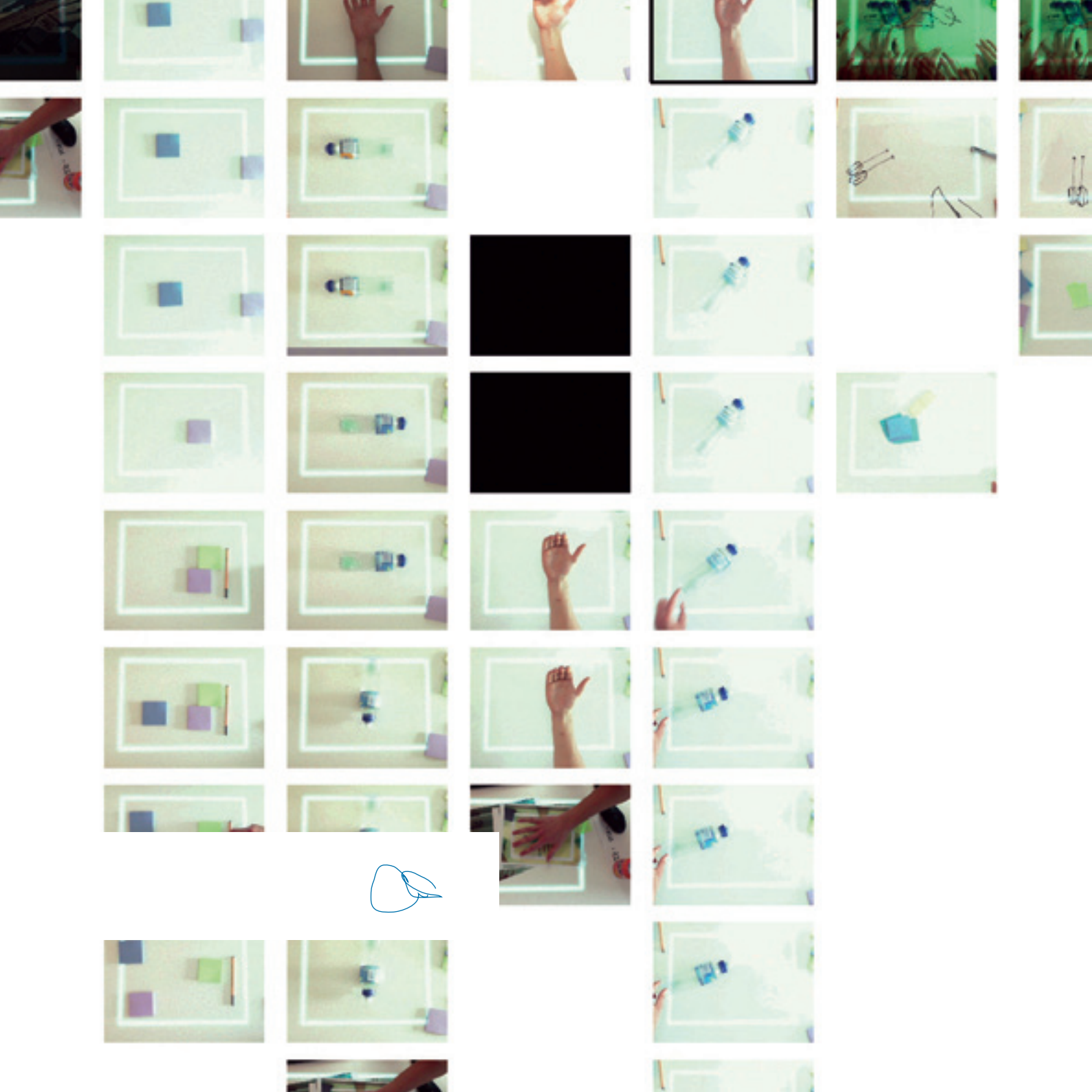
Education Embedding design tools, procedures and experiments in educational context to support our research and development. To integrate all the activities required to transform ideas, fuzzy notions and concepts into possible products or problem-solving solutions.





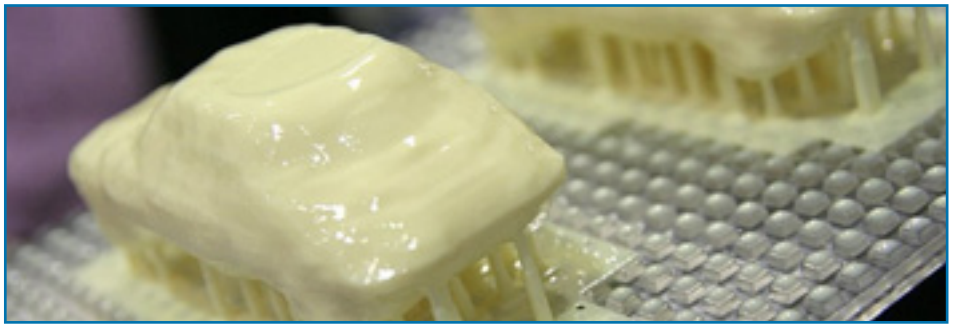
PROBEER HET HIER !

INDUSTRY we reach out and dedicate ourselves to cooperate with the design and engineering industry to test, experiment and undertake case-based studies incorporating hybrid design tools.

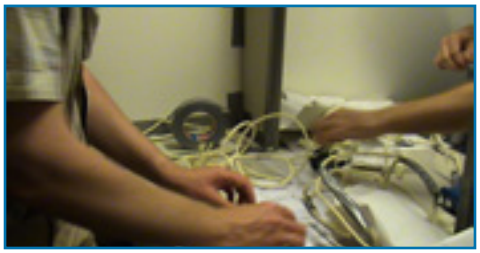


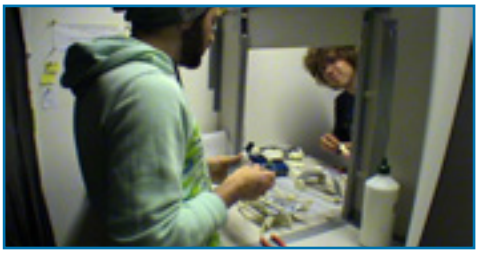
Tools & Procedures for Design Engineering

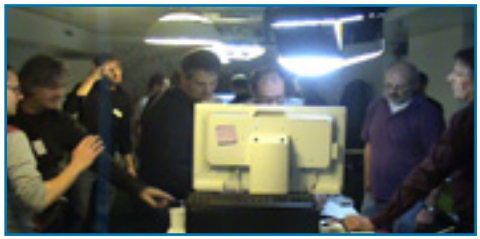
unthethered physical tangible processing combined with virtual or augmented reality to enhance synthesis of design & engineering processes.

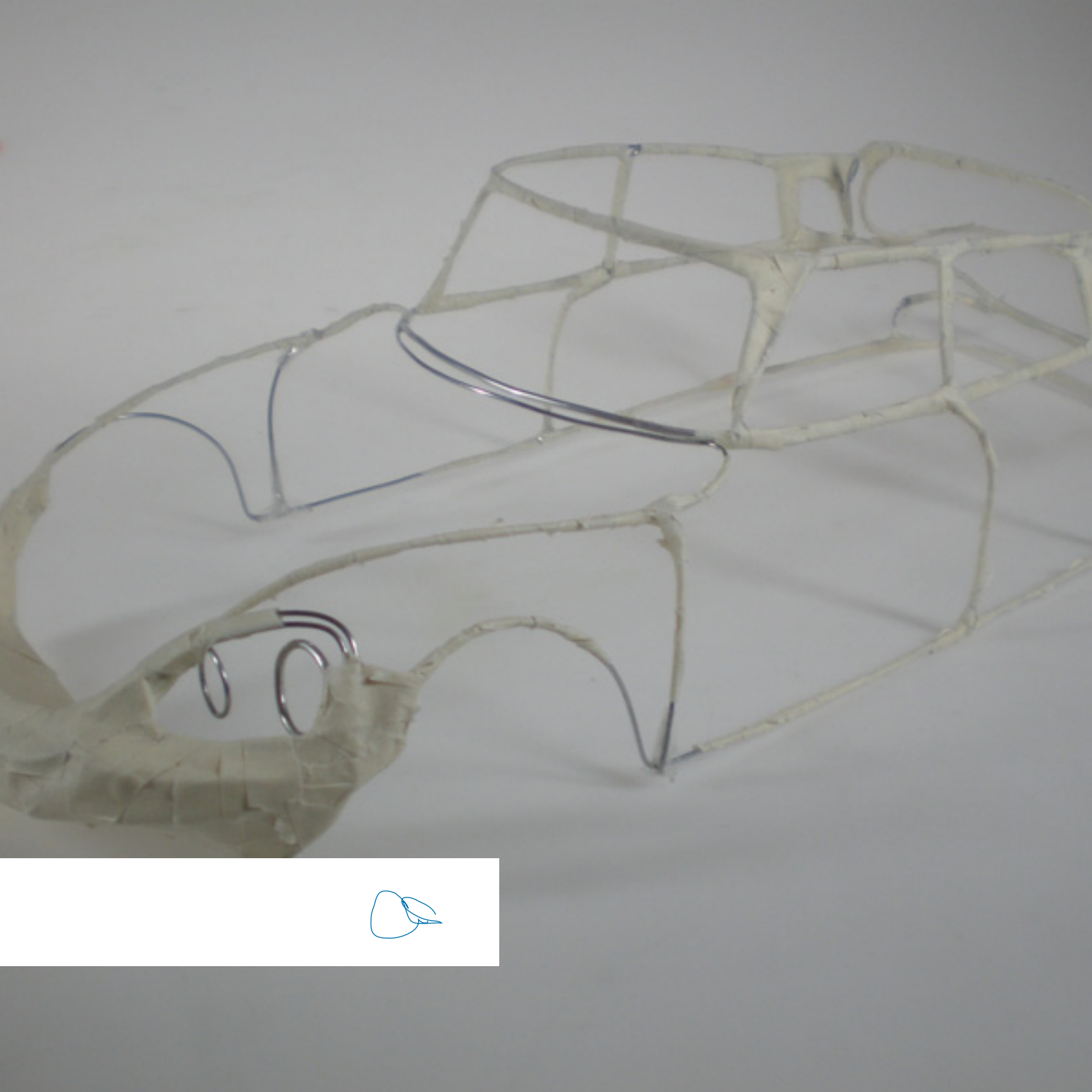


Collaborative Interaction stimulate interaction between various users or stakeholders. Loosely and structured mapping of data [2D or 3D], create novel data, collaborative visualization system, synthesis of design and engineering processing, review, store, analyze data, decision-making and easy choice-architecture. We provide novel visualization and interaction ways to explore, create and manipulate data.









Laboratories

Lab for intuitive design, mixed reality, interaction and simulation.

Lab for virtual reality and augmented reality, motion capture, various vision systems.

Lab for pseudo-haptics, haptics and reverse engineering [3D scanner, 3D printing & RP machines]

rawshaping
technology

Design Engineering

University of Twente
Design, Production & Management
De Horst [Building #20]
Lab room nr. w253
7522 NB Enschede
the Netherlands

info@rawshaping.com
www.rawshaping.com