

Factors Affecting the Extension and Quality of Teamwork in New Operational Design Concepts

The Extended-Teamwork 2004 Study

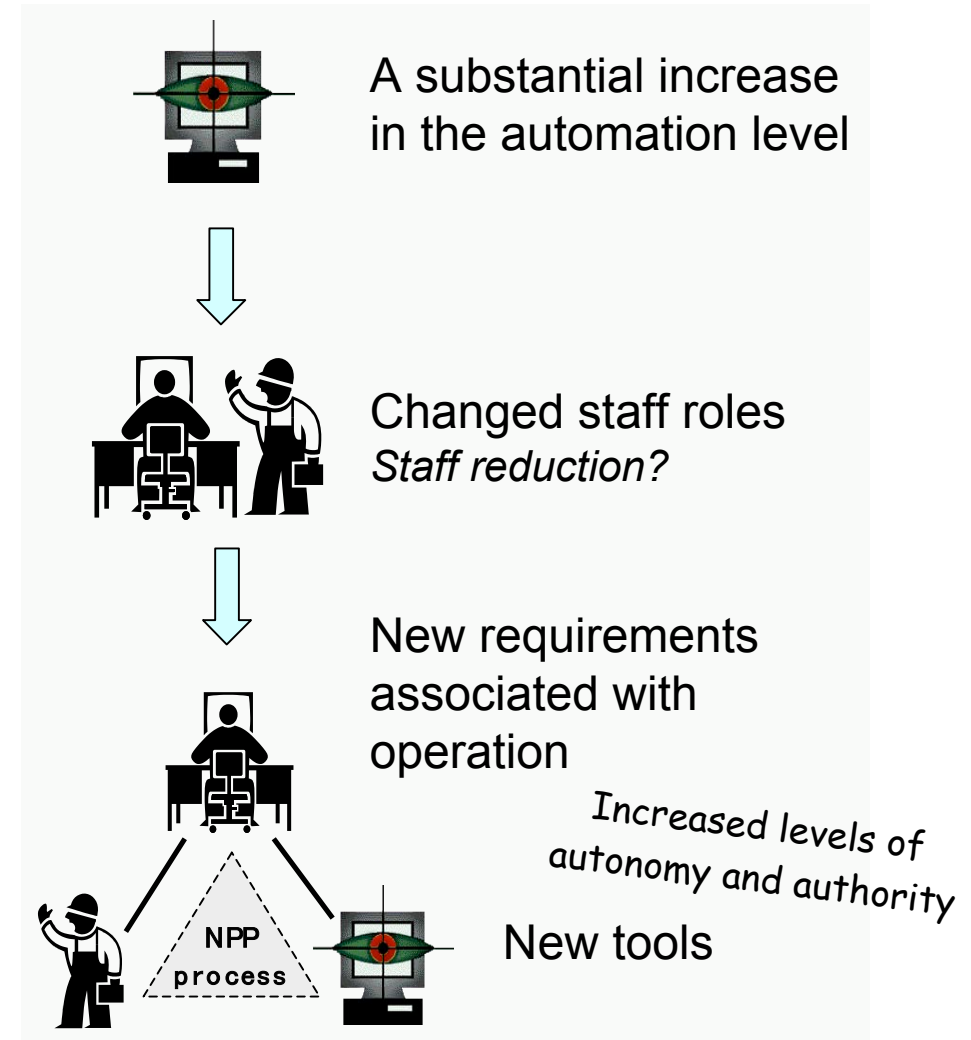
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New operational concepts are currently being debated in the domain of nuclear power plants:

- multiunit operations by a single operator
- remote unit operations by a single crew
- no full-time, on-duty operations staff, occasional operations tasks are performed by other functional units (e.g., engineering or maintenance)
- reduced staff with an individual for multiple reactors and decentralized functional groups for maintenance and emergency
- Etc.



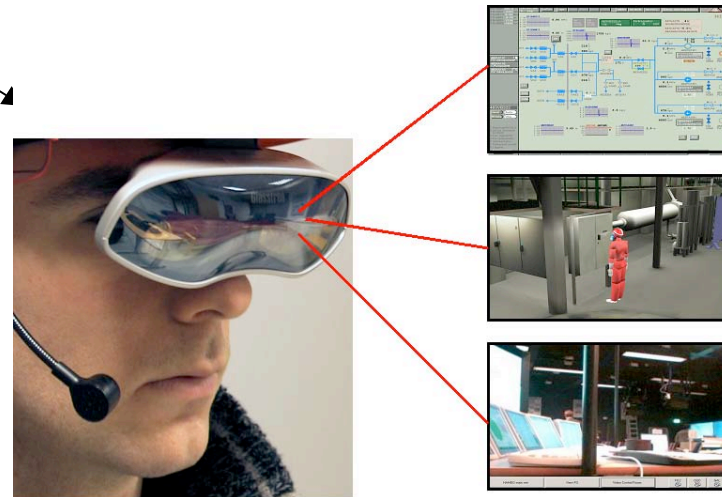
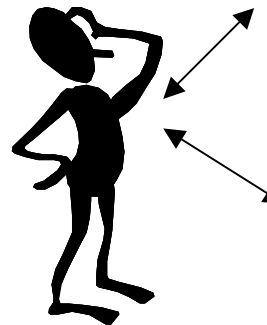
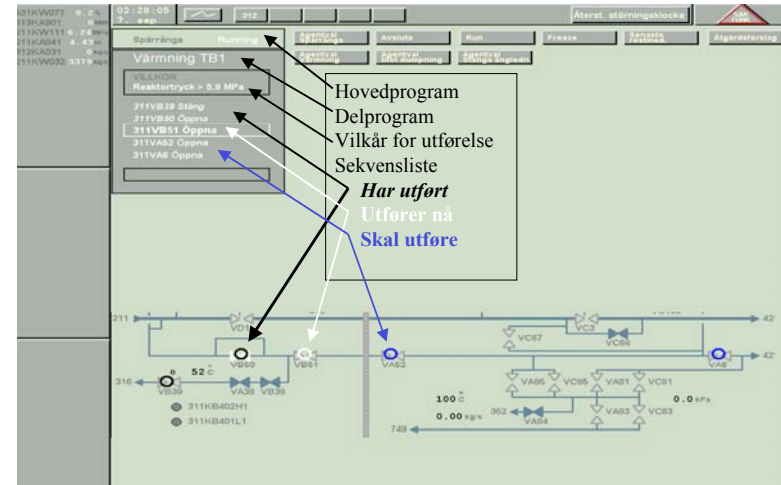
FAQ to Human Factors practitioners:

What will be the effect on human performance of this type of operational environment?

How should the roles of humans be designed?

What type of support will human needs?

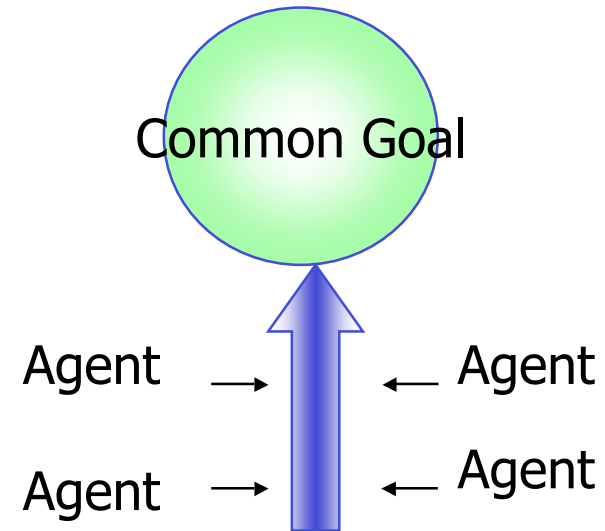
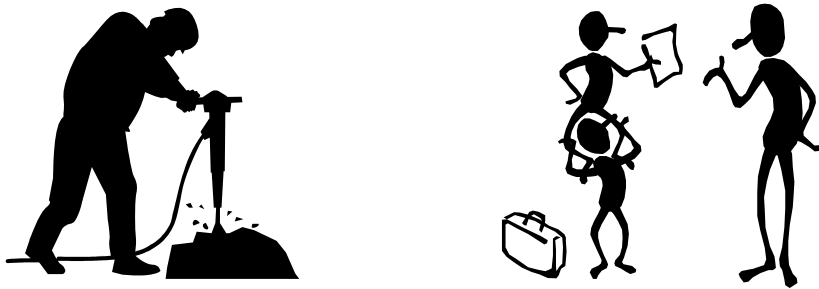
Etc.



The Extended-Teamwork 2004 study explores the effects on **teamwork** of a possible future operational environment.

Teams are media for fostering co-operation:

Taskwork and *Teamwork*



Attributes of co-operative activity

- share information openly
- take one another's perspective
- communicate and influence each other
- exchange resources
- assist and support one another
- handle conflicts efficiently

Factors affecting teamwork in practice:

1. Education and training
2. Possibility
3. Willingness



1. Education and skills
2. Possibility.
3. Willingness

Collectivism: “... occurs when the demands and interests of groups take precedence over the desires and needs of individuals.” (Wagner and Moch, 1986).

Self-efficacy: “... beliefs in one’s capacity to organize and execute the courses of action required to produce given attainments.” (Bandura, 1997, 3)

Collective-efficacy: “... represent the belief of a group of members concerning “...the performance capability of a social system as a whole.” (Bandura, 1997, 469)

Trust: assured reliance on the character, ability, strength, or truth of someone or something

Norms of Reciprocity

- Organizational culture
- Social capital



INPUT FACTORS

THROUGHPUT FACTORS

OUTPUT FACTORS

