SYSTEMS THINKING

A *System* is a set of interacting or interdependent parts that form a unified whole.

Systems Thinking is therefore a way of making sense of the complexity of the world by looking at it in terms of wholes and relationships rather than by splitting it down into its separate parts.

It is valuable to apply systems thinking to the workplace to understand how various interactions (positively or negatively) influence human and organizational performance.

For more information on systems thinking and performance influencing factors see Canadian Standard Association Express Document 16:22 entitled Human and organizational factors for optimal pipeline performance (available for free download at the CSA e-store).

For more learning resources on Human and Organizational Factors and Safety Culture visit the CER's Safety Culture Learning Portal.

The Workplace System

Organizations are comprised of people, technology, and organizational structures that are constantly interacting and changing. Systems thinking helps us identify and consider these dynamic elements and their influence on performance outcomes. This can be particularly helpful when considering safety and environmental protection outcomes but is applicable to all types of workplace performance (i.e., outcomes and results achieved).

The following model provides a visual representation of applying systems thinking to the workplace. It denotes the three key elements of the workplace system and examples of the performing influencing factors that characterize each element:
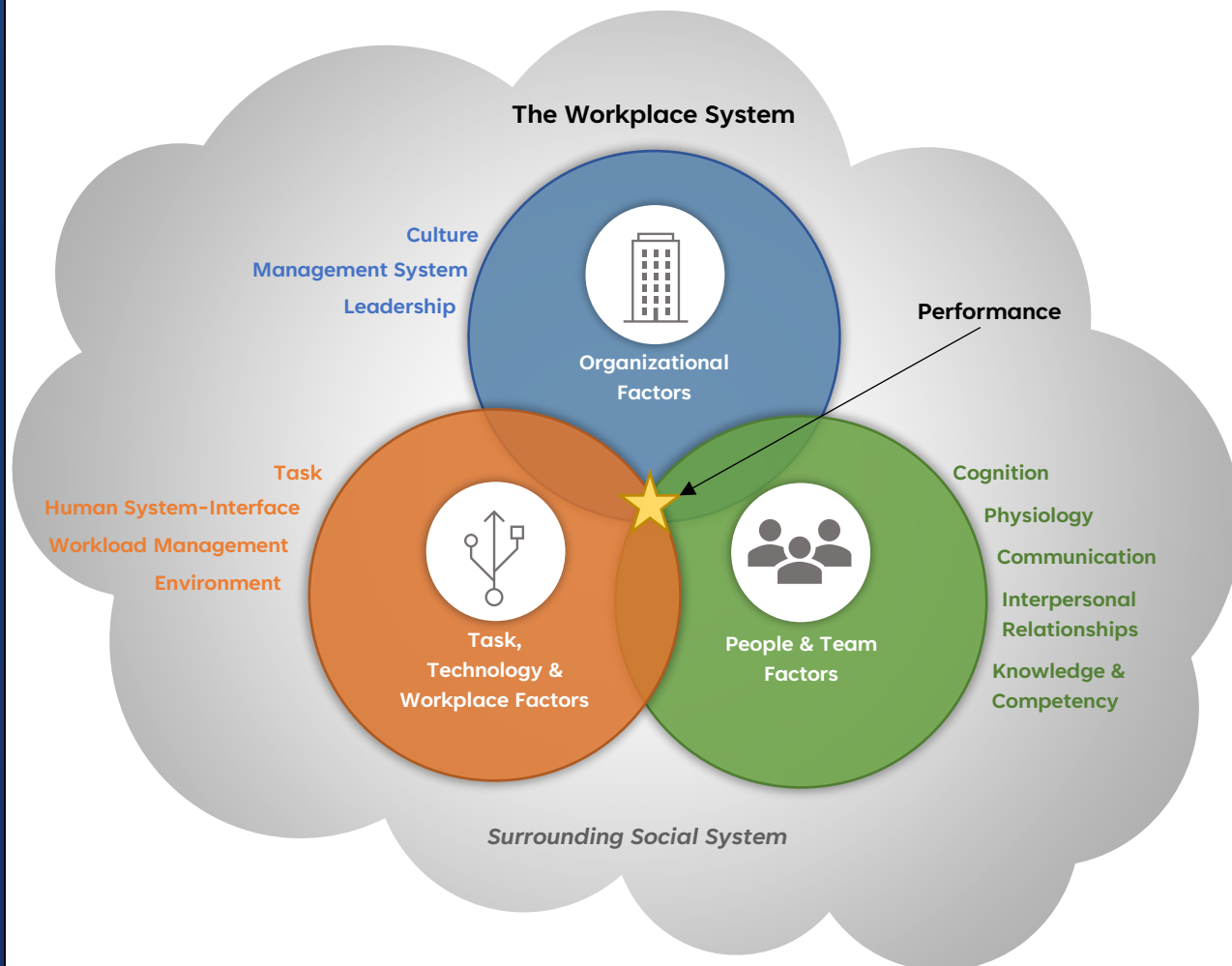
The interactions and interdependencies between these elements form the context in which work is performed (i.e., how decisions are made and what actions are taken). Performance is at the center of the workplace system. It is important to be aware of the surrounding social system that also has an influence on the workplace system and its performance.

In order to support optimal performance, the application of systems thinking and the identification and evaluation of workplace system complexities can be applied proactively (threat prevention) and reactively (understanding what happened when things go wrong).

Reflective Questions:

(1) What is your current mental model of workplace performance? How does the systems thinking model compare? What are some potential benefits and challenges of applying this model of performance?

(2) How do you consider performance influencing factors in the work that you do? How could better consideration of these factors enhance performance in your workplace?