



Productivity & the Knowledge Worker

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The Power of Productivity

Productivity isn't everything, but in the long run it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker.

([Krugman, 1994](#))





The 20th century productivity increase

- Task analysis and automation have raised productivity by ca. 3% per year for over 100 years
- The Organization, the owner of the production capability, has lead this work



The 21th century productivity dilemma

- Societies have moved from production to service and knowledge work
- In knowledge work the production capabilities is own by the knowledge worker
- Who shall lead the productivity increase of the 21st century?





Scientific Knowledge

- Scientific knowledge should:
 - Provide a method to sort, do a typology
 - Predict future events
 - Explain past events
 - Increase understanding of causality for events
 - Give the possibility of control

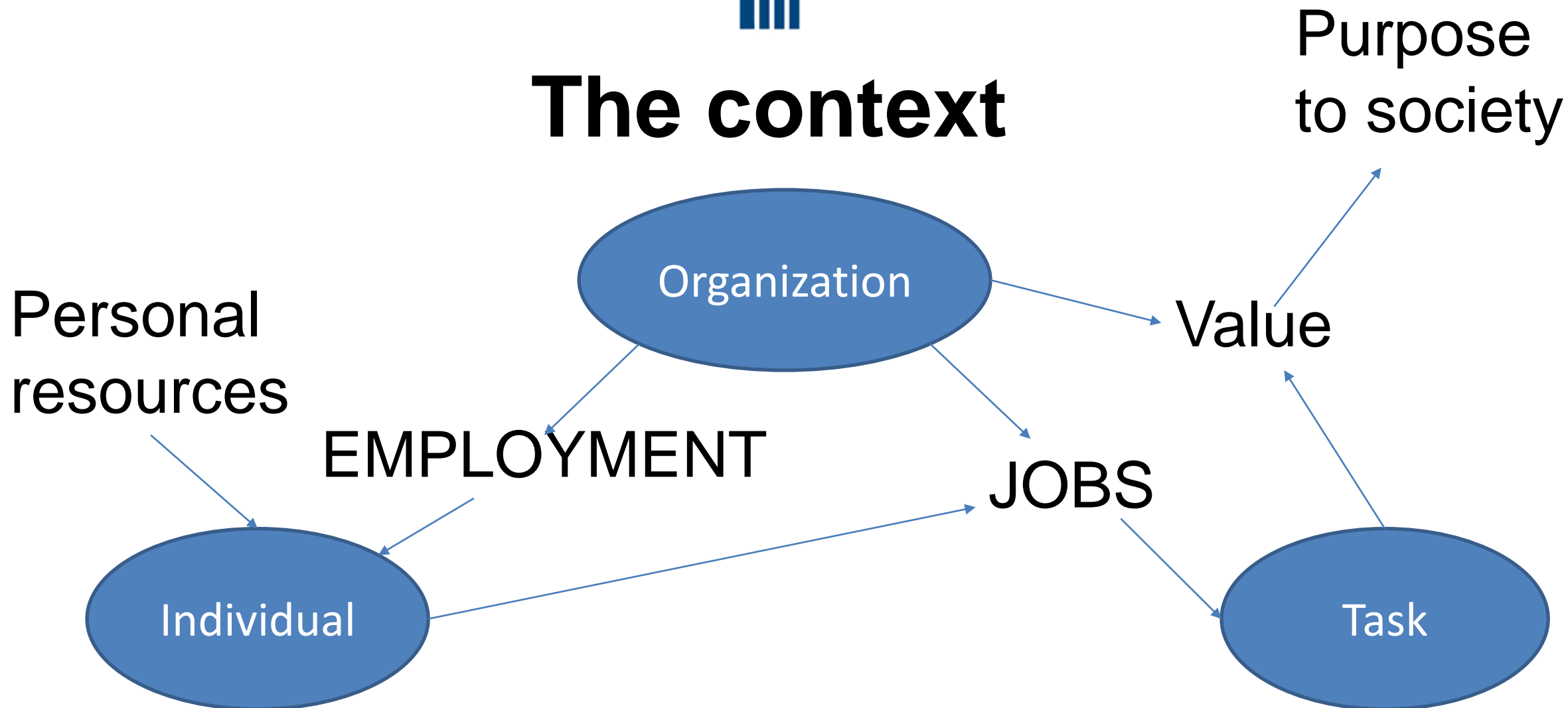


Scientific theory

- A rather general view on a scientific theory is that it consists of four elements:
 - Definition of elements and variables
 - A domain where the theory holds
 - A collection of links / interactions between variables
 - A specific forecast / prediction

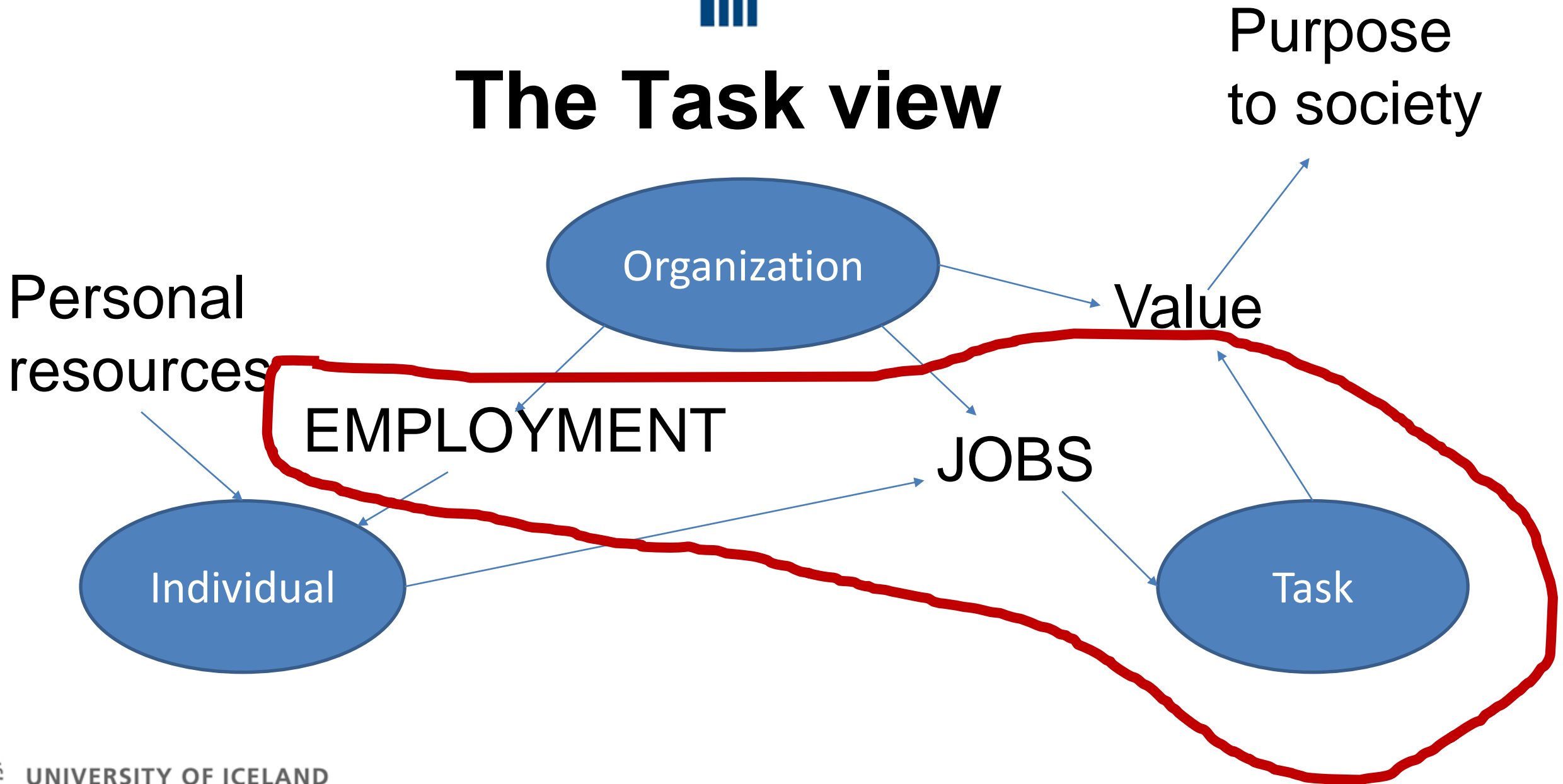


The context





The Task view





Tasks

- Physical and cognitive tasks on a continuum



- Task can be on either side or a blend



Tasks and Knowledge

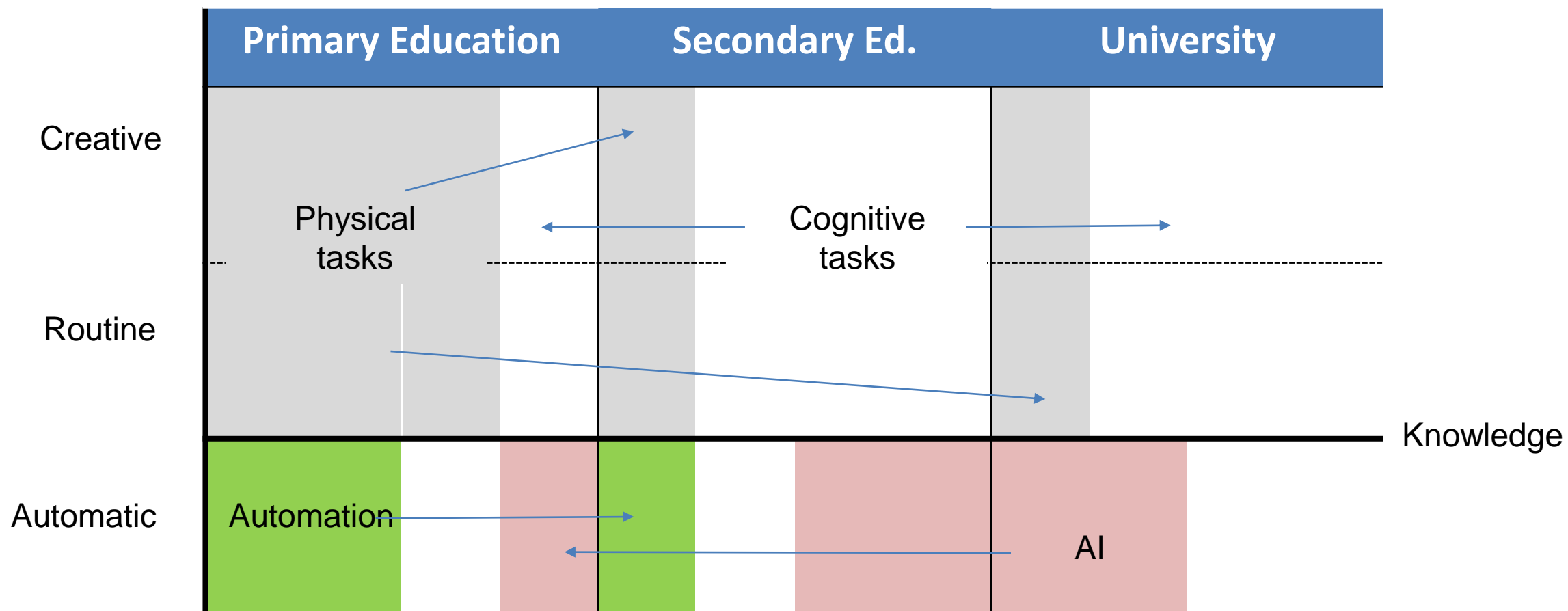
	Primary Education	Secondary Ed.	University
Creative			
Routine			
Automatic			

Knowledge





Tasks and Knowledge

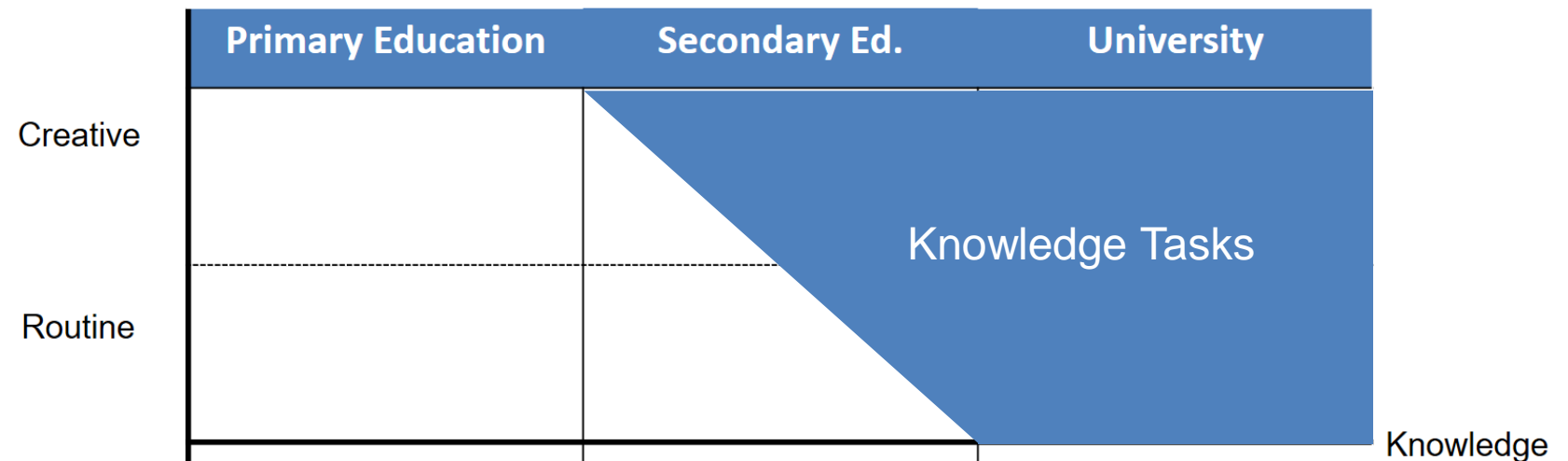




Knowledge Work (as Employment)

- Knowledge Work is when considerable part of task are knowledge tasks

Task-based Knowledge Intensity Score = **TaKIS(%T)**



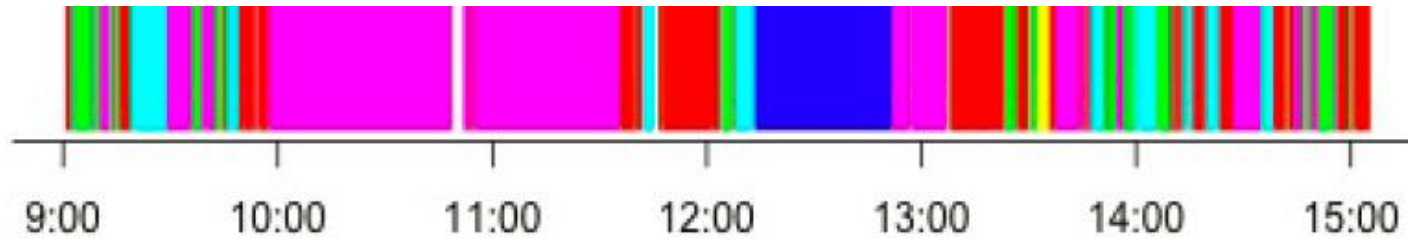
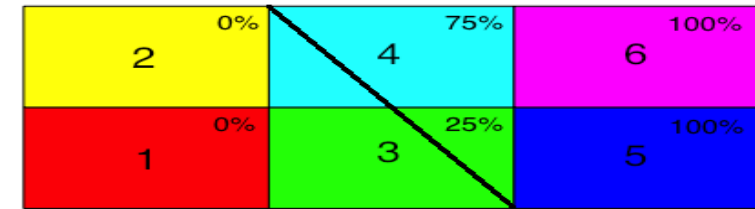


TaKIS measurement on Employment

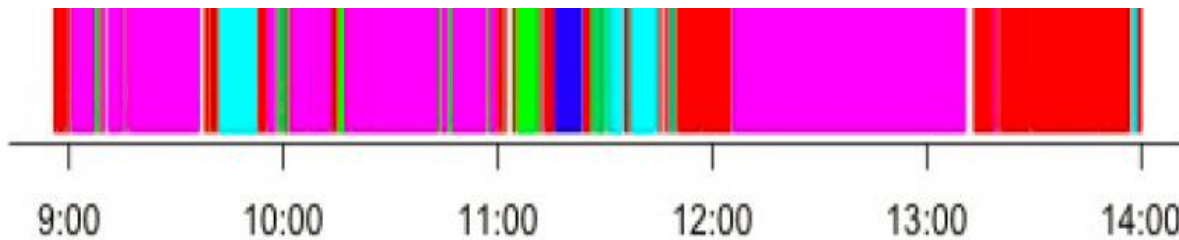
- Healthcare workers in a Hospital
 - Medical Specialist (Doctor) 64%
 - Project Manager 63%
 - Nurse 59%
 - Shift Manager - Emergency Room 45%
- Sales force in Wholesale (4x) 17%
(5% - 28%)



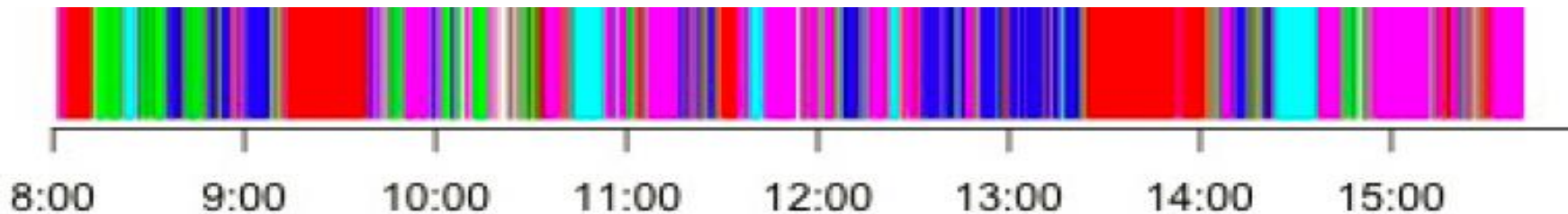
Day in „tasks“



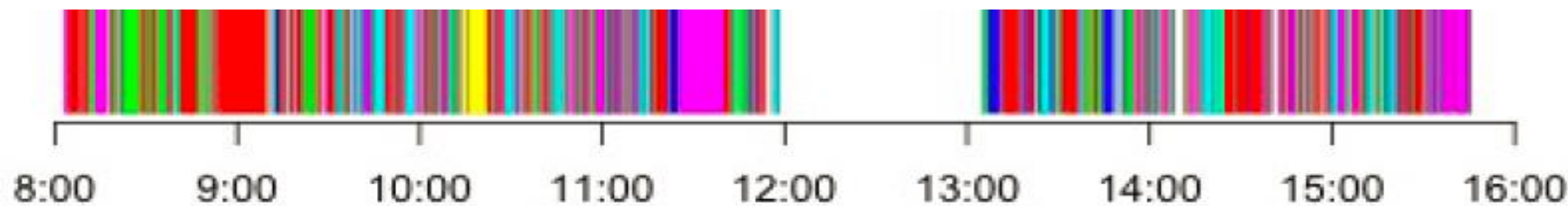
Medical Specialist 64%



Project Manager 63%



Nurse 59%

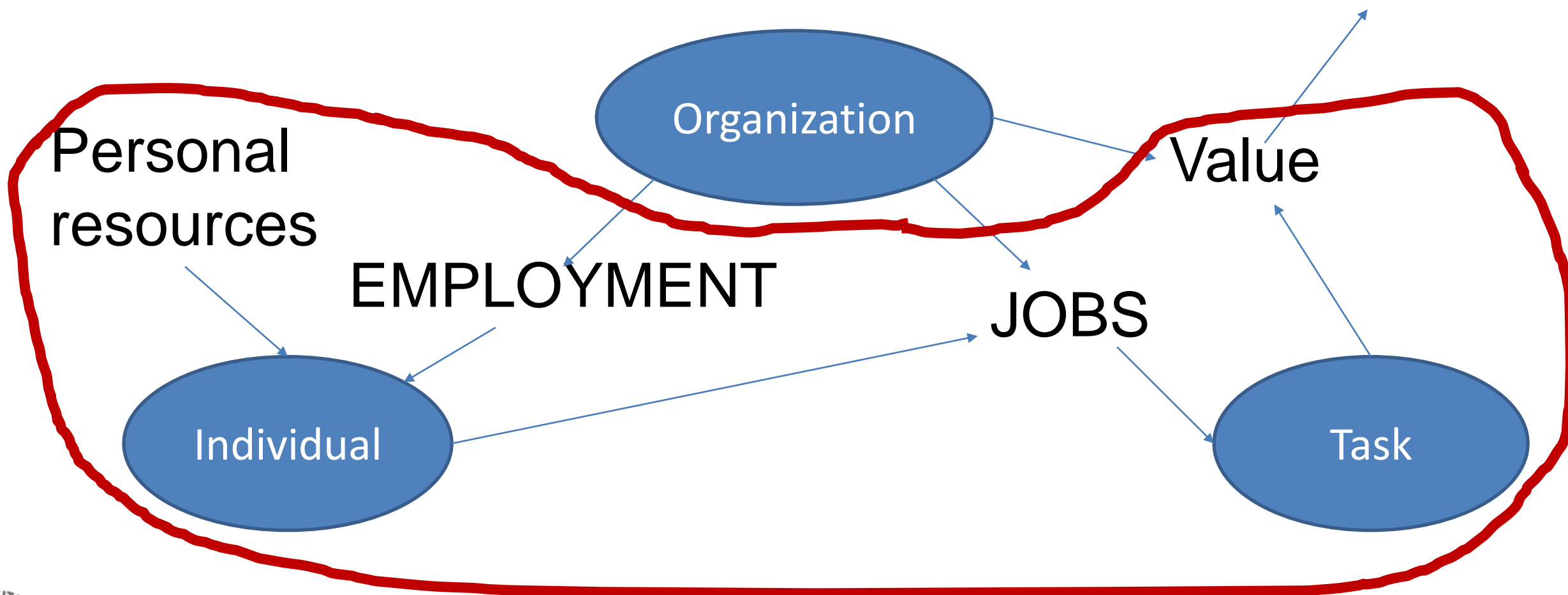


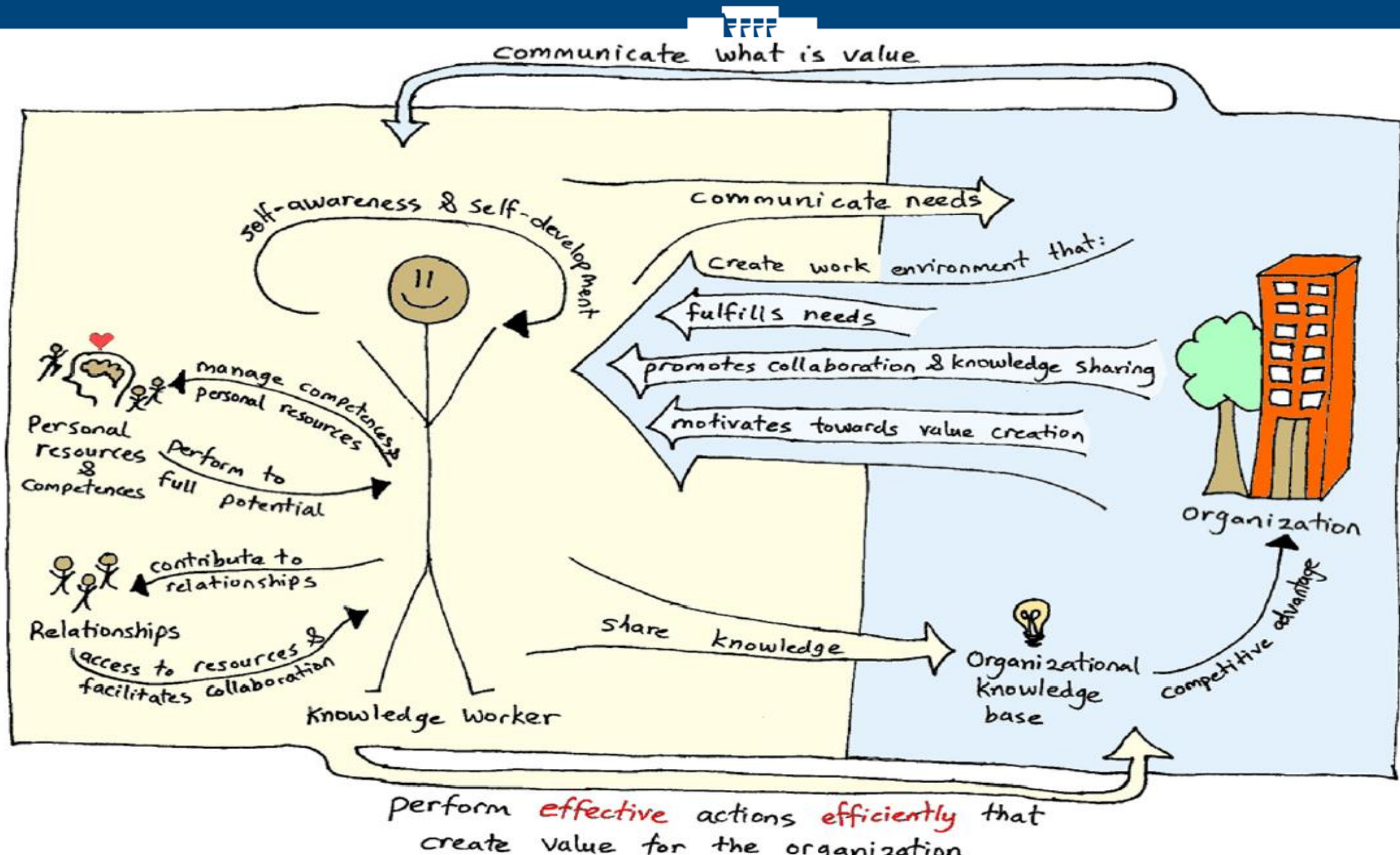
Shift Manager - ER 45%



The Knowledge Worker view

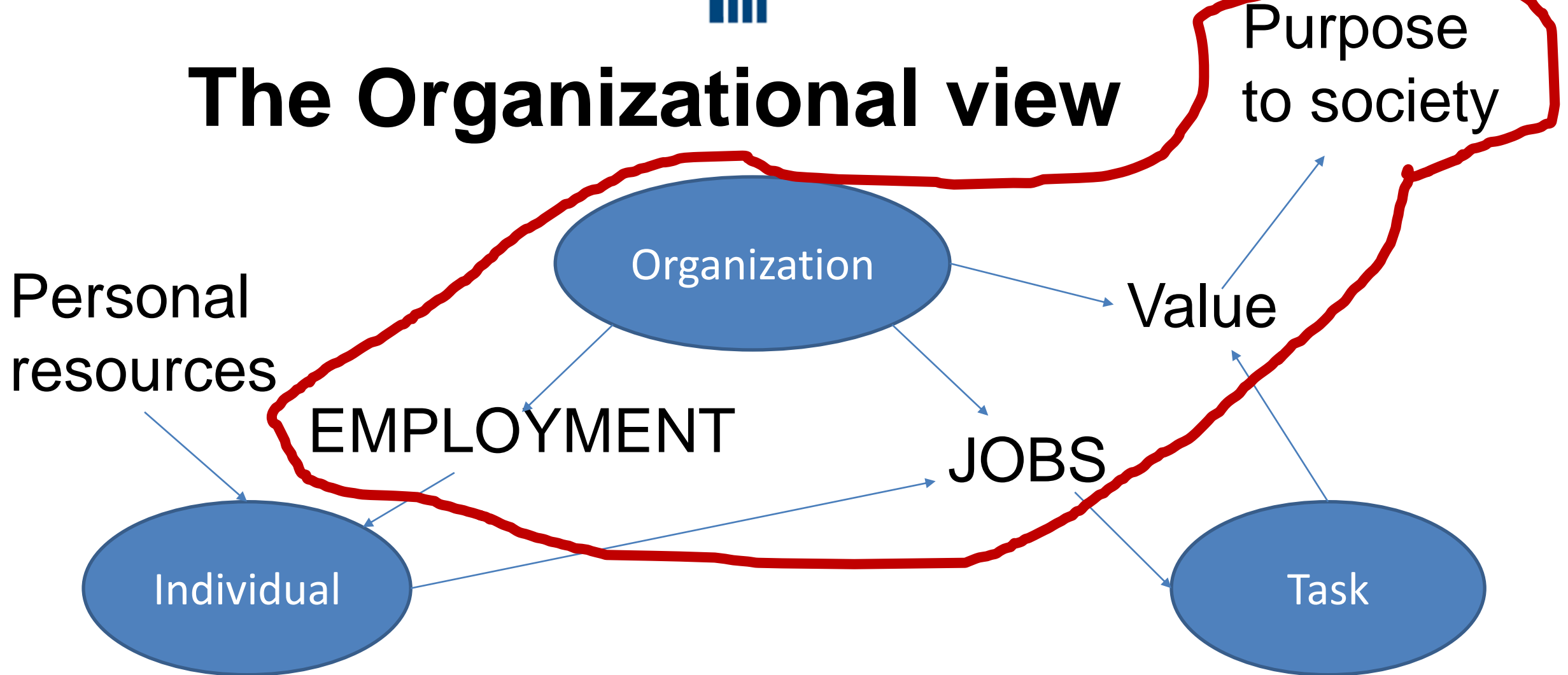
Purpose
to society







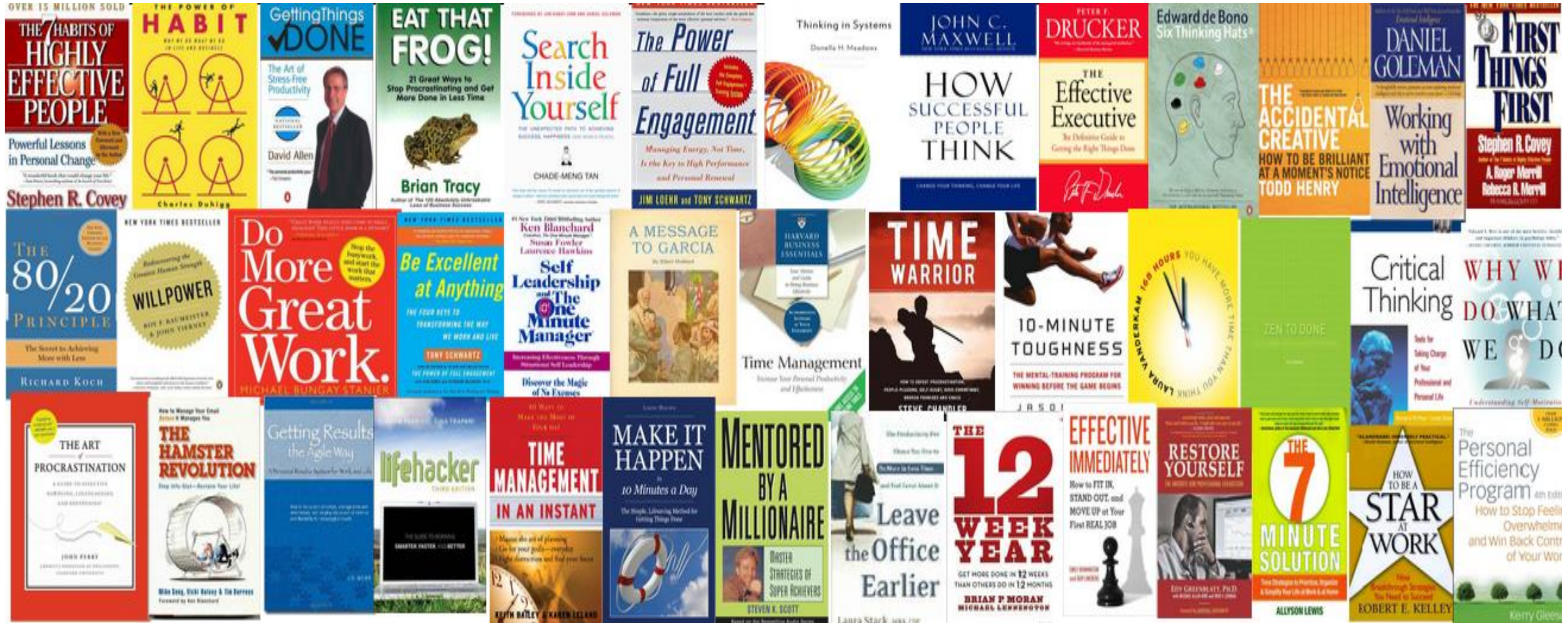
The Organizational view





Owners of Productivity

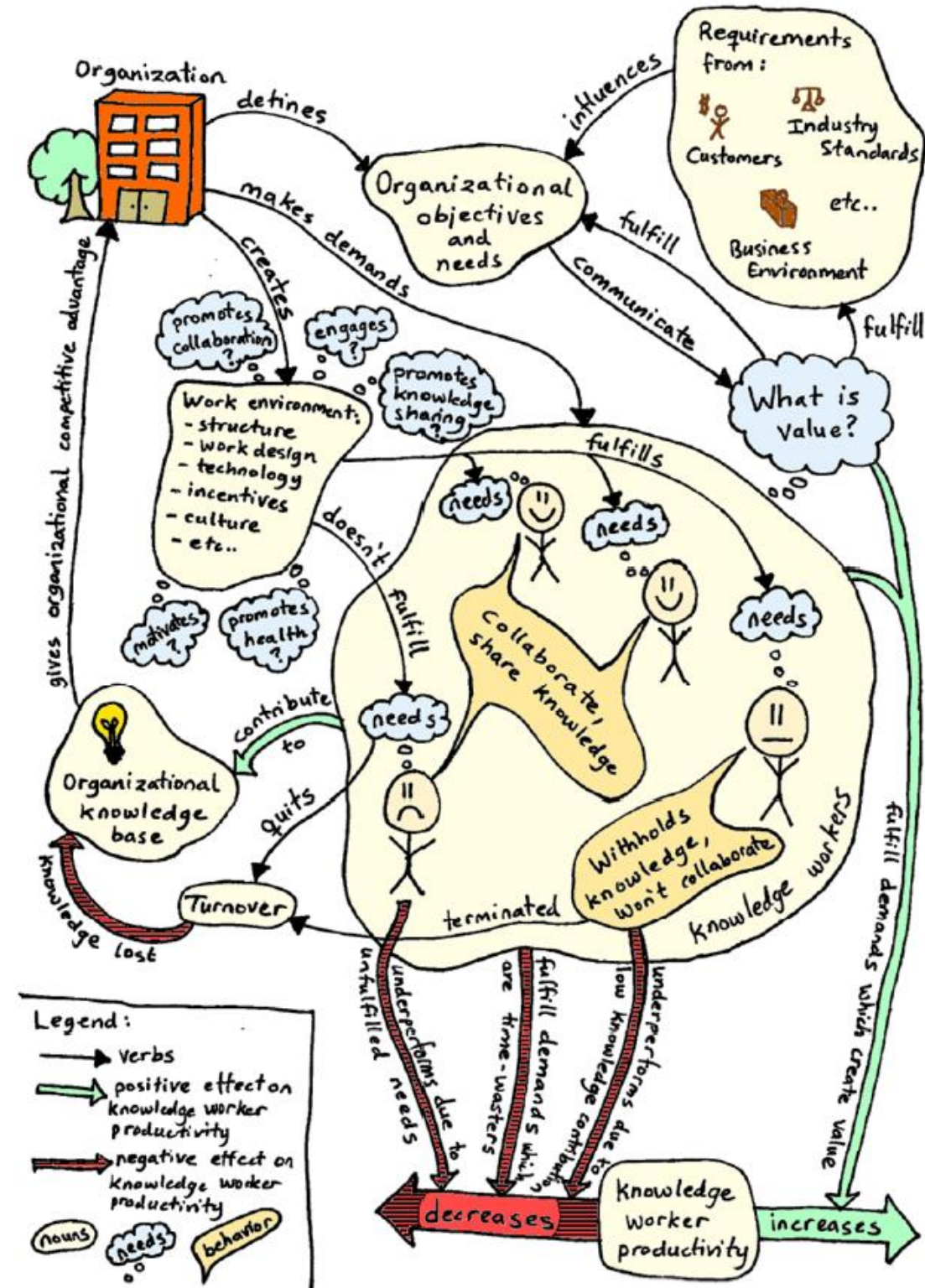
- **Organization** as owner
 - Conventional approach in both production and service organizations
 - Less in Knowledge Intensive Organizations
- **Knowledge Worker** as owner
 - Dominant in Knowledge Intensive Organizations



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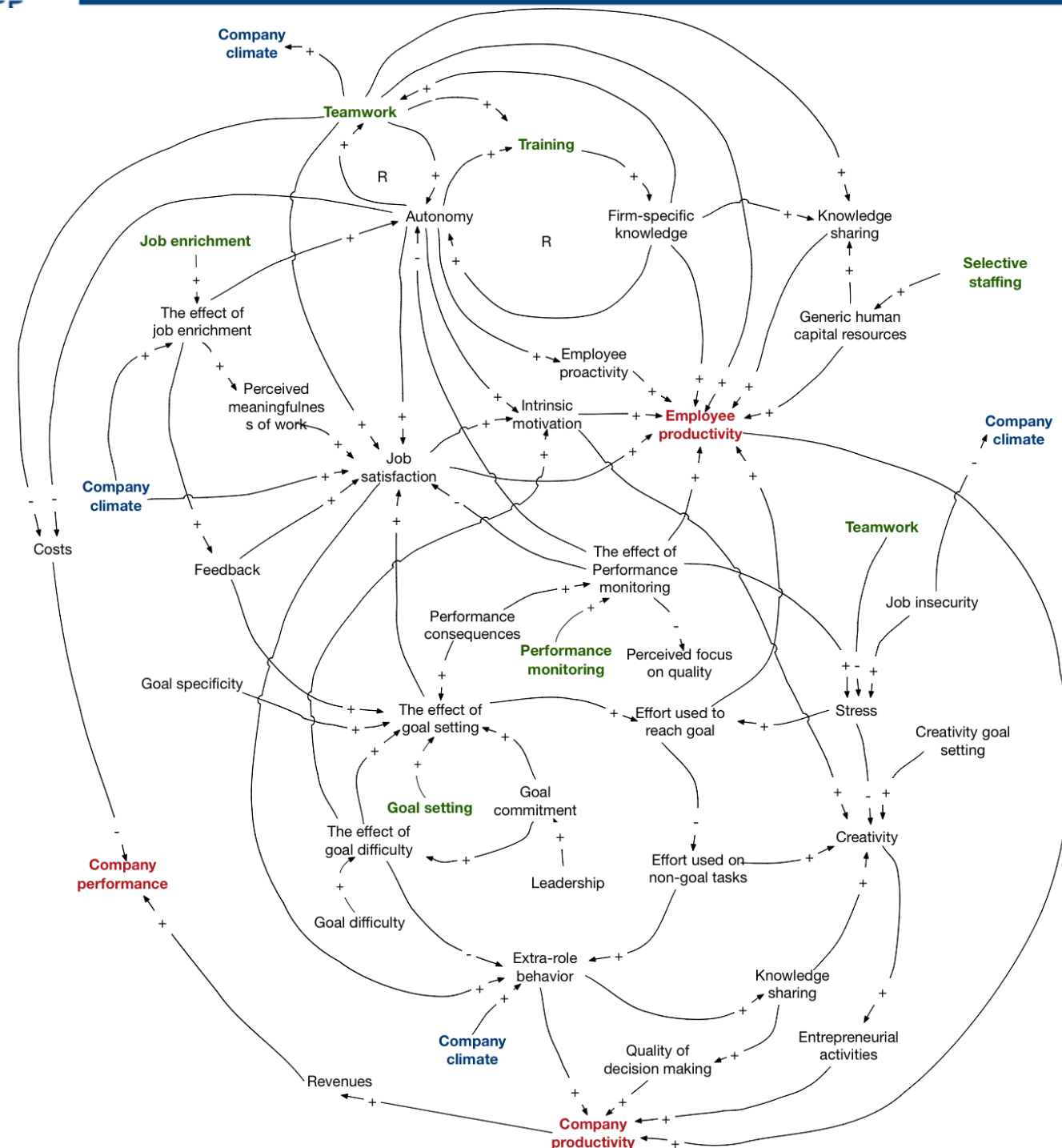
Organization as owner

- Organization has to communicate **its objectives and needs** to the knowledge worker for them to fulfil
- Work environment has to promote **cooperation and sharing of knowledge**
- Work environment has to fulfil **the knowledge workers needs** to get the best performance from them



Productivity & I-O psychology

Information on the **components affecting productivity** and how they interact was gathered from the **industrial and organizational psychology (I-O psychology)** literature as researchers in that field have spent a great deal of effort on shedding light on the subject





The theory of Knowledge Worker Productivity

Status of KWP theory building is:

- Definitions of are coming along but not done
- Domain is unclear
- Some ideas on relations, causality unclear though some elements are known
- Prediction not possible





Why bother?

- ‘anticipation of a future that has already happened’
(Drucker, 1990s)
 - Changing demography in the West / World
- The 4th industrial revolution
 - Work 4.0

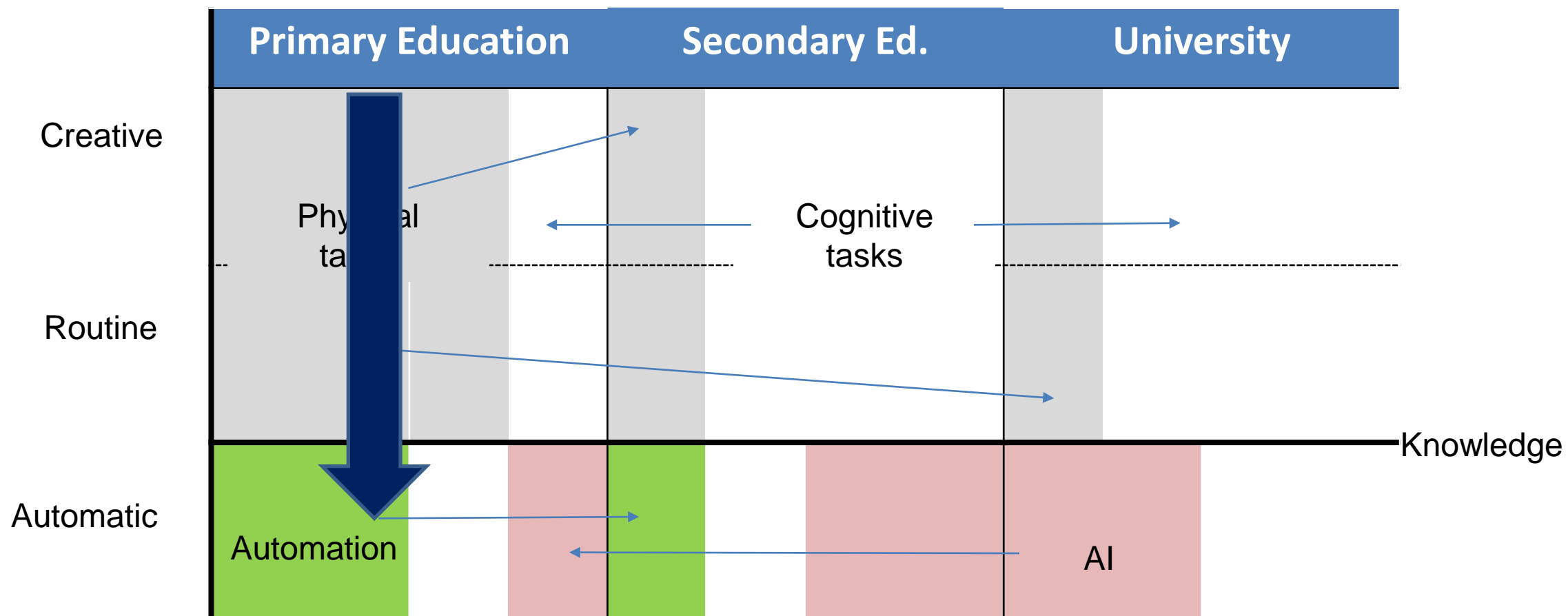


Productivity & the Knowledge Worker

	Manual Productivity	Knowledge Worker Productivity
Owner	Organization	Individual
What to do - Employment	Organization	Organization
- Job	Organization	Organization
- Tasks	Organization	Individual
How to do	Organization	Individual
Training	Organization	Individual
Production Capabilities	Organization	Individual
Tenure	Long	Short(er)
WHY improve	Make MORE	Shrinking RESOURCES



20th century productivity increase





21th century productivity increase (?)

