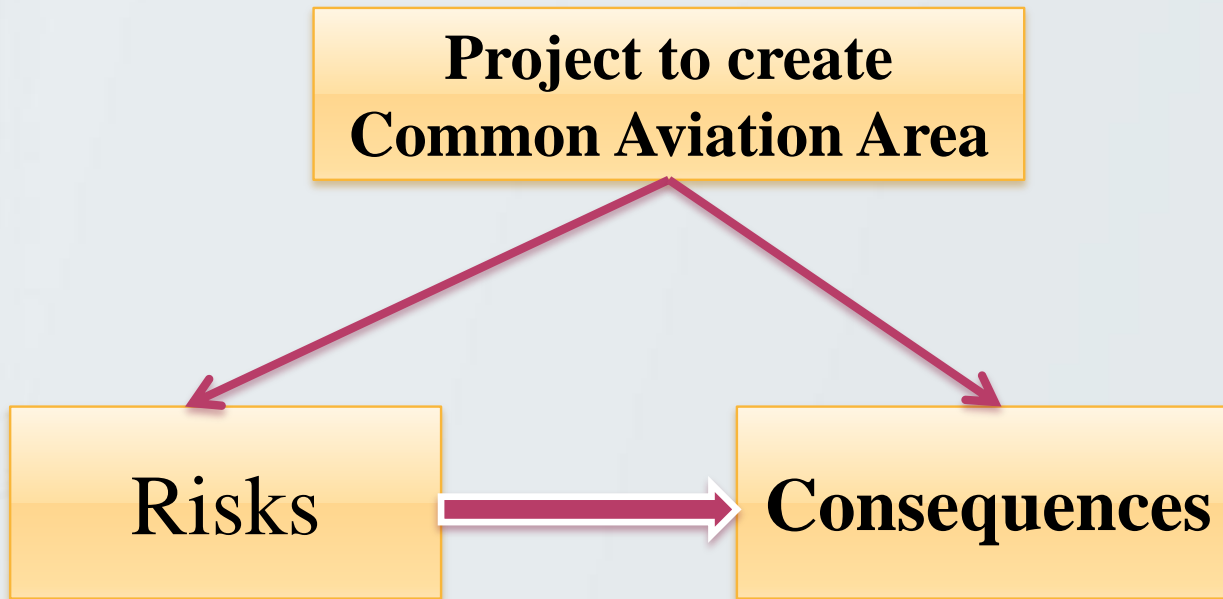




Requirements to the UAV Operators for Ensuring Flight Safety

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National Aviation University

PROJECT TO CREATE COMMON AVIATION AREA



POSSIBLE RISKS (COLLISIONS, HITTING THE GROUND, AND SO ON)



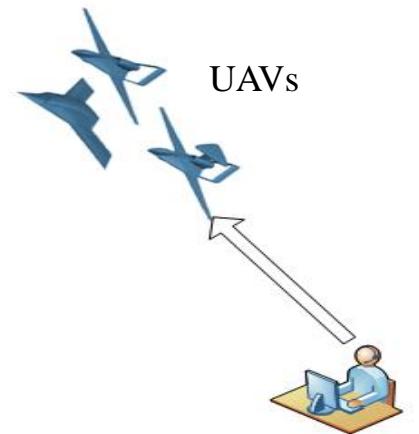
Helicopter



Aircraft



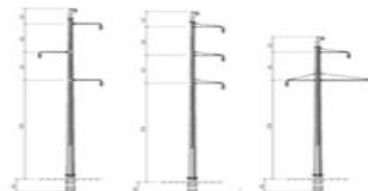
UAV



UAV operator

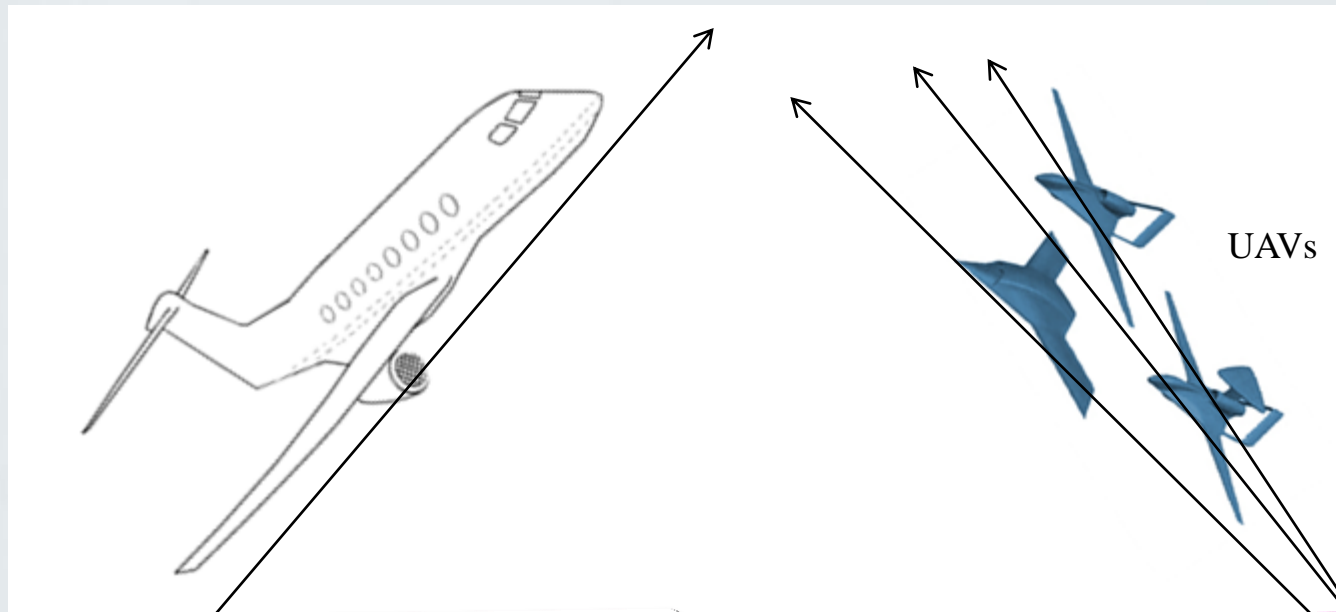


relief



birds

RELEVANCE OF THE PROBLEM OF FLIGHT SAFETY



Aviation authorities

- Controllers

UAV operators

THE OBJECTIVE:

To minimize the consequences of the project by means of conducting a professional selection among the applicants for UAV operators

PROBLEM STATEMENT

- Among the large number of applicants for UAV operators, to select the individuals who comply with the requirements to effective UAV operation:

$$T_{\ddot{o}}^3 \leq T_{\ddot{o}}^{\zeta\grave{a}\grave{a}}$$

THE ASSESSMENT OF THE CONTROLLERS BY THE TIME CONSUMING UNDER EMERGENCY SITUATIONS

The cycle of UAV control performed by a UAV operator

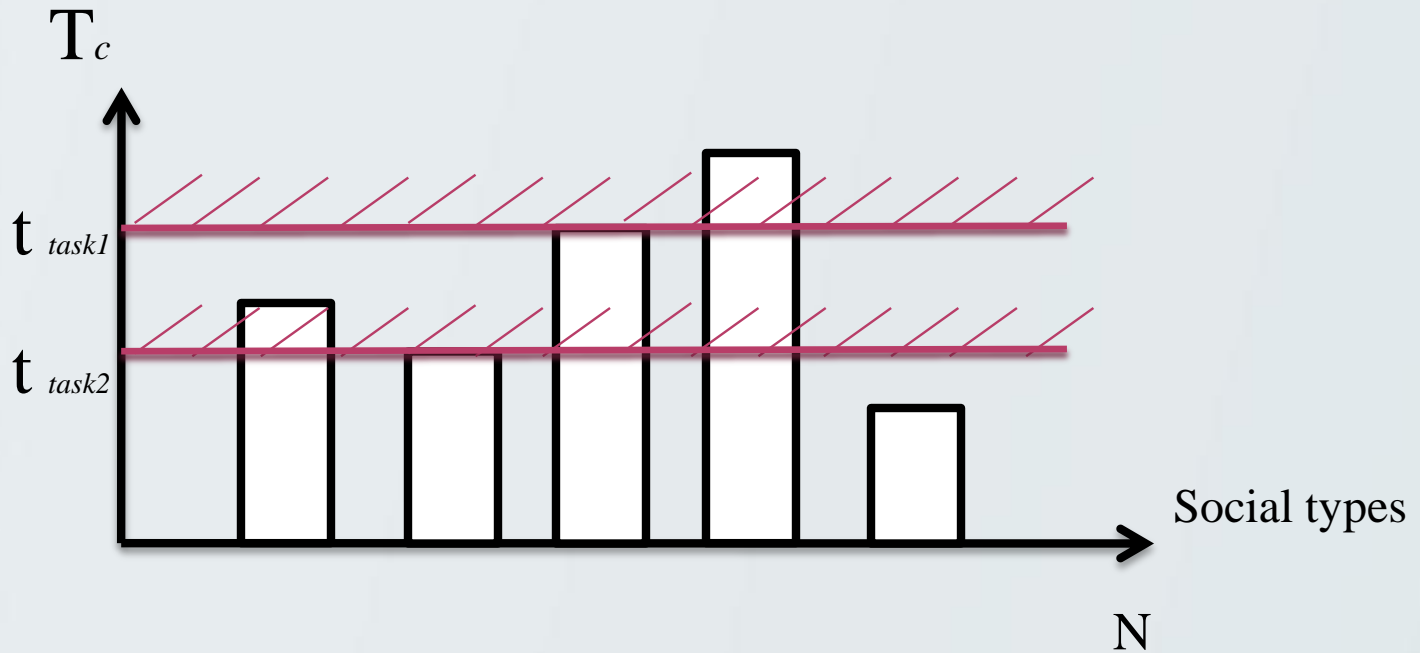
$$\mathbf{T}_c = \mathbf{t}_{an} + \mathbf{t}_d + \mathbf{t}_{im}$$

where: \mathbf{t}_{an} – time required for processing the information;

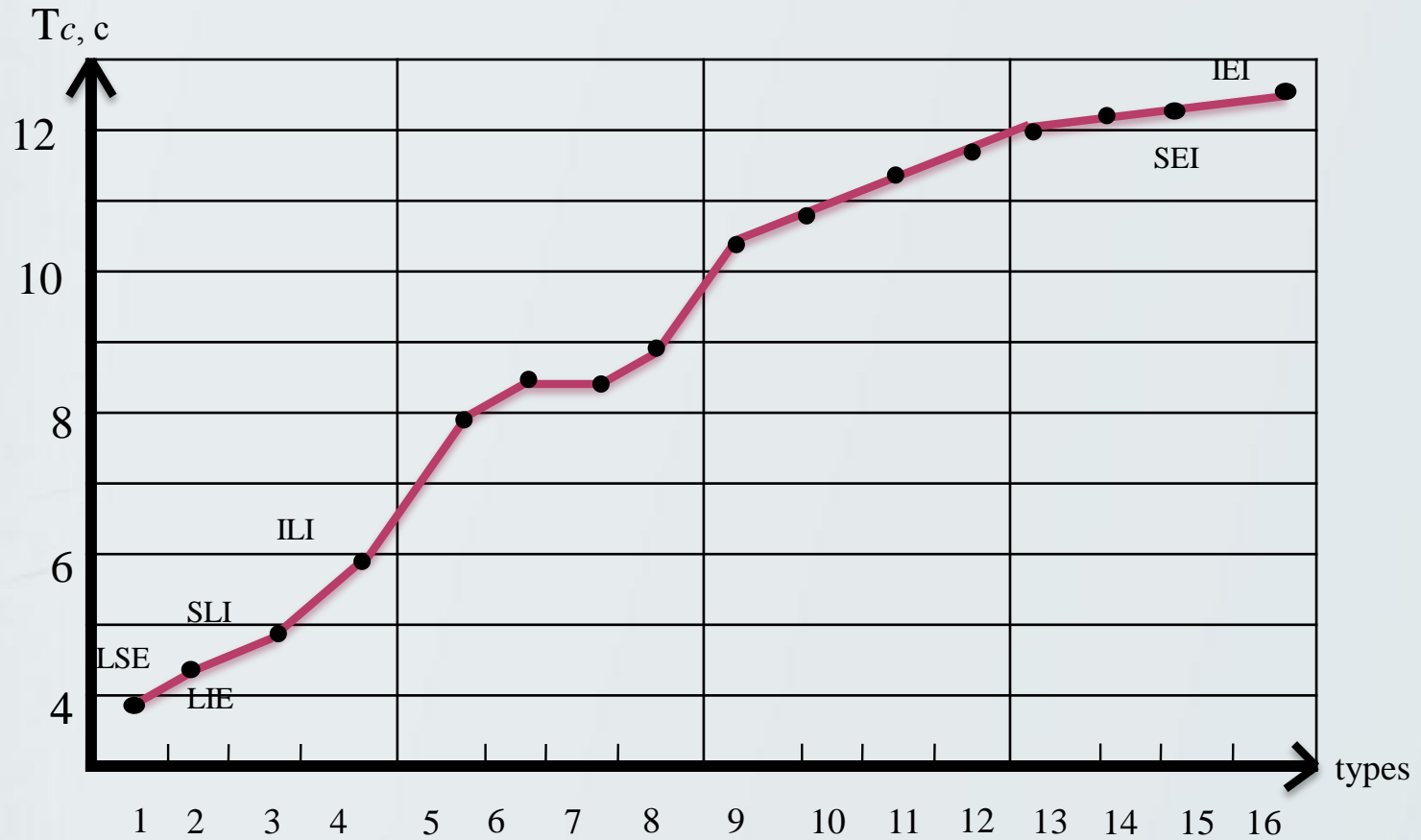
\mathbf{t}_d – time required for decision-making;

\mathbf{t}_{im} – time required for the implementation of a decision made.

THE FUNDAMENTALS OF THE REQUIREMENTS TO THE APPLICANTS FOR UAV OPERATORS



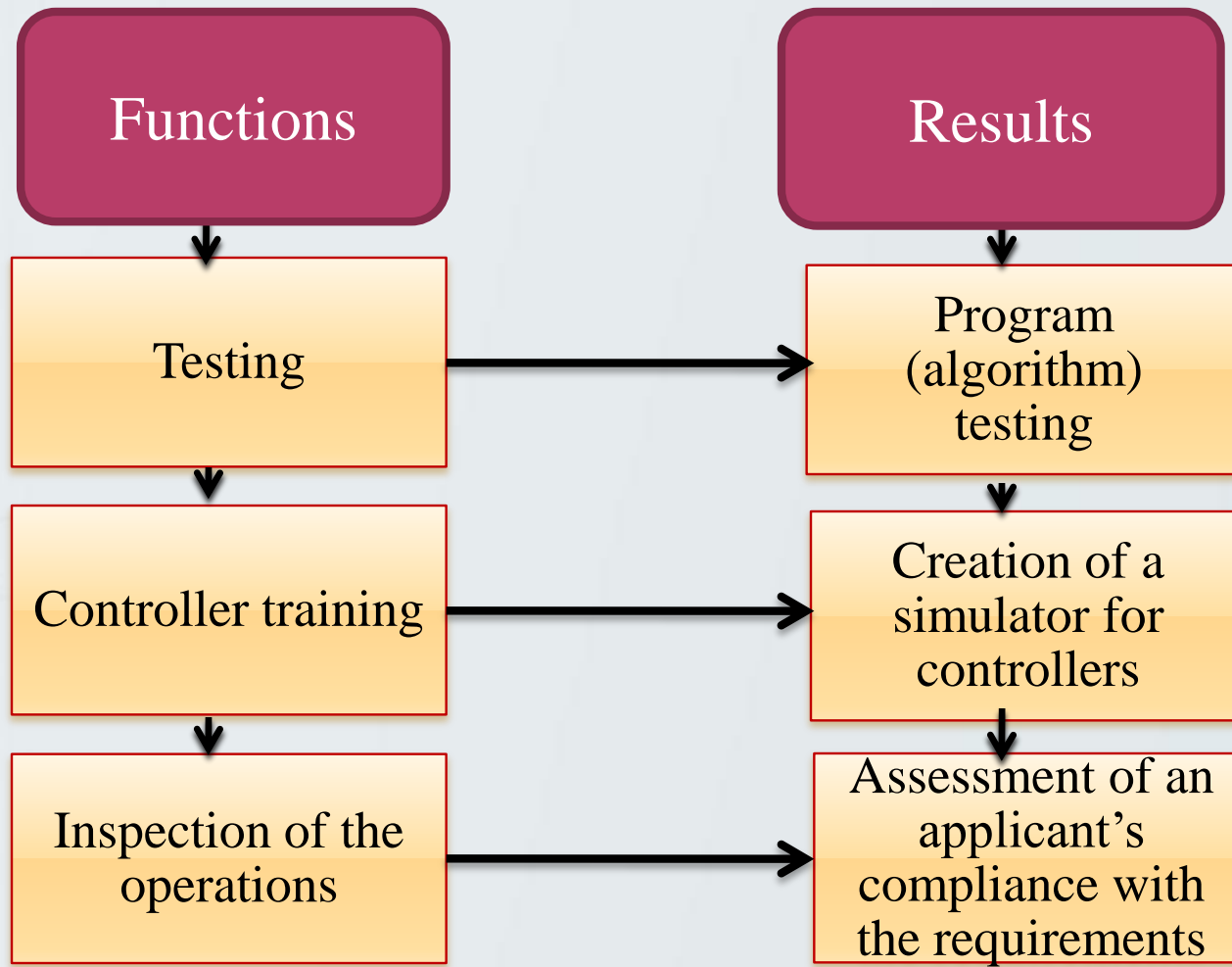
THE FUNDAMENTALS OF THE SELECTION BY MENTAL CHARACTERISTICS



THE ANALYSIS OF THE DATA OBTAINED DURING RESEARCH



FUNCTIONS AND RESULTS OBTAINED UPON COMPLETING THE TASK OF PROFESSIONAL SELECTION OF UAV OPERATORS



THE METHOD OF PROFESSIONAL SELECTION OF APPLICANTS FOR UAV OPERATORS

- 1. Determination of mental characteristics of applicants at the stage of testing (programs of testing).
- 2. Assessment of the time consuming used for the completion of testing tasks (business games, simulators).
- 3. The results of the comparative assessment based on the specified values and making a decision pertaining to professional selection.

THE OUTCOME OF THE METHOD USED DURING RESEARCH

$T_c = 4 \text{ sec.}$	$T_c = 5 \text{ sec.}$	$T_c = 6 \text{ sec.}$
LSE	LSE, LIE, SLI	LSE, LIE, SLI, ILI

CONCLUSIONS

1. One of the “weak links” of Common Aviation Area System which includes civil and military sectors of responsibility is a UAV operator.
2. To ensure the specified level of flight safety in Common Aviation Area and to eliminate the possible consequences of UAV operators’ activities, the method of professional selection has been developed.