

## Optimal task division between Man and Machine for Border Control - Matrix

Keeping in mind that humans remain at the core of border management, the consortium aimed to define the optimal allocation of tasks between humans and machines for Border Control.

The chosen methodology to achieve this goal is the following:

- Starting from the core tasks completed by border guards (defined by Frontex)
- Identifying humans' strengths for each task
- Identifying machines' strengths for each task
- Presenting relevant solutions relying on these strengths
- Discussing the context and process in which they can be used
- Deriving recommendations for future solutions' design and use

## The 5 Border Management core tasks

| Document    | Are the documents authentic and valid ?                                |
|-------------|--|
| Eligibility | Is the person allowed entry based on the information on the document ? |
| Identity    | Is this the person on the document ?                                   |
| Purpose     | Has the person a credible justification and means of subsistance ?     |
| Threat      | Is the person not a threat - known registered, unknown behaviour?      |



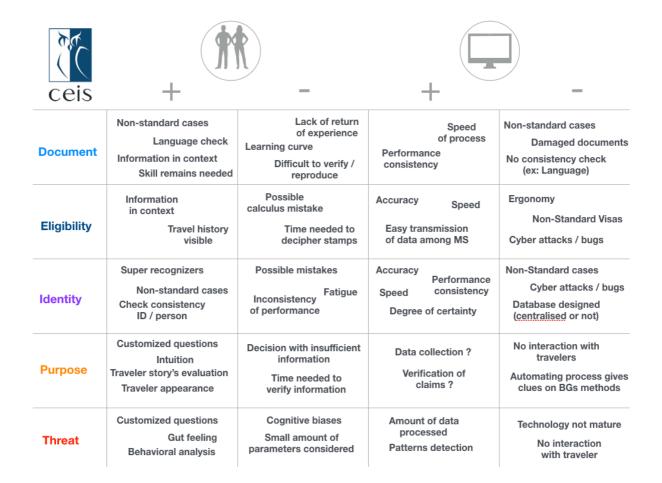


Starting from this list, desk research, interviews and field studies have been conducted to better understand the processes implemented for each task both for manual and automated border controls.



The next step was to **perform a first assessment of the respective strengths and weaknesses** of humans and machines in the conduct of the core border management tasks as presented in the matrix below.

N.B.: In the case of the machines, the strengths identified are under optimal operating condition.



## Conclusion

In a nutshell there are two types of tasks:

- Conformity verification tasks: "document", "eligibility" and "identity" are technical tasks and
  can thus be performed by machines under human supervision N.B.: humans nonetheless need
  to retain the related manual skills in case of system failure and o manage non-standard cases
- **Intention's assessment tasks**: "purpose" and threat are pertaining to the analysis of human behaviour and should thus be performed by humans, possibly with the assistance of machines

In both cases, Humans should make decisions and be in a position to overcome the automated mode if necessary.

